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April 22, 1983

Mr. Samuel J. Chilk
Secretary to the Commission
U. S. Nuclear Regulatory Commission
Washington, D.C. 20555

Attention: Docketing and Service Branch

Dear Mr. Chilk:

By notice published in the Federal Register on March 3, 1983 (48 Fed. Reg. 9106-09), the Commission requested public comments on its study of alternative programs for improving quality assurance and quality control in the construction of commercial nuclear power plants and a related pilot program to review and evaluate certain alternatives. The Commission was directed to undertake the study and pilot program by Sections 13 (b) and 13 (c) of the NRC Authorization Act for fiscal years 1982 and 1983. Section 13(d) requires the Commission, within 15 months of enactment, to provide a report to Congress on the results of the study and pilot program, and to include the recommendations of the Commission and any administrative actions that the Commission has undertaken or intends to undertake for improving quality assurance and quality control programs.

The Commission's request for public comments does not contain any background information, analyses or proposals developed by the Commission, but merely reproduces Sections 13 (b), 13 (c) and 13 (d) of the Act. Although we realize this format probably resulted from the Commission's desire to comply at the earliest possible date with the Act's requirement that public comments be obtained, it unfortunately does not provide any specifics upon which comments can focus. Nevertheless we have reviewed those portions of the Act and their limited legislative history and have prepared some preliminary comments on the five alternatives, which are enclosed in the attachment to this letter.

*DS 09
Add Terry Harpster
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Acknowledged by card *4/29/83 PD*

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Particularly in view of the ambiguities in the Congressional mandate, in addressing each alternative the Commission will need to identify with some care the specific problems of concern to Congress and the Commission's understanding of the scope of the alternative and of various mechanisms it believes could be used to implement the alternative. In fact, since the Commission must first develop this information in order to define the study to be performed, we urge the Commission to publish it for public comment promptly. With the benefit of this additional information, public comments as to the scope and direction of the study should prove to be more focused and helpful.

In addition to developing factual information available as a result of past experience with each alternative, the Commission's study should be structured so as to produce:

- (1) an analysis of the potential benefits and disadvantages of each alternative (including the various mechanisms studied); and
- (2) estimates of the manpower and financial resources that would be required for implementation of the alternative by the Commission and licensees, as well as potential impact on construction schedules.

We believe that we and other interested parties could provide much more meaningful assistance to the Commission once it has developed the bulk of the foregoing information. Accordingly we also urge that approximately 9-12 months into the study, the Commission plan to make available for public comment its preliminary results, together with tentative recommendations and actions planned by the Commission. On the basis of the much more insightful and precise comments it will then receive, the Commission will be able to refine both the factual portions of the report and the Commission's recommendations and planned actions.

In our view, one of the Commission's paramount considerations in reviewing the alternatives and developing its recommendations and actions should be to assure that the resulting regulatory framework properly combines the activities of both the licensees and the Commission. Many licensees have made significant changes in the structure of their programs and in the manner in which they discharge their responsibilities for quality assurance and quality control. Significant contributions are also being made by industry groups, notably INPO. The Commission itself has undertaken many new initiatives with regard to quality assurance for plant construction. It is vital that all of these activities -- each of which has individual merit -- not be looked at in isolation, but that each be fit into a coordinated regulatory

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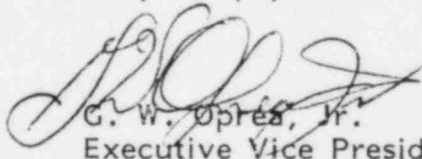
program that seeks to accomplish basic objectives while avoiding unnecessary duplication of efforts.

We believe that the basic elements of effective quality assurance in nuclear plant construction are a well-defined program with explicit lines of responsibility, upper management's strong commitment to and vigorous participation in the quality assurance program, capable personnel in quality assurance management positions for both the utility and its contractors, a well-planned and comprehensive training program for personnel, and internal mechanisms for assuring effective implementation and corrective actions. Many of the alternatives suggested in the Act (e.g., more extensive use of independent audits and third-party evaluations; improvements in NRC initiatives, etc.) do not deal directly with these elements. Although some of these alternatives may nevertheless be important, they must be reviewed in proper perspective and they must be utilized in a fashion which enhances -- and does not detract from -- the ability of the licensee to discharge its primary responsibility for the quality of plant construction.

At this time, we have only limited comments concerning the pilot program mandated by Section 13(d). As mentioned above, many licensees have made recent changes in their quality assurance programs. A number of these changes illustrate one or more of the alternatives which the Commission is to assess through the pilot program. The Commission should be able to use these recent and ongoing efforts of the licensees within its pilot program without the need to modify any licensee's program. As mentioned by Senator Simpson on the floor of the Senate, the intent of the sponsors was that the Act "be implemented so as to avoid delays or disruption in plant construction, particularly with respect to the pilot program." (Cong. Rec., S. 2491, March 22, 1982.) We are confident that the Commission will be able to implement its pilot program in just such a manner.

We would be pleased to provide any amplification of our comments that the Commission would find useful, and we look forward to the Commission providing the opportunities for further comments that we suggest above.

Very truly yours,



G. W. Oprea, Jr.
Executive Vice President

GWO/sra
cc: J. H. Goldberg
J. E. Geiger

Additional Comments of Houston Lighting & Power
on the Five Alternatives Listed in Section 13(b)

The limited legislative history of Sections 13 (b), 13 (c), and 13 (d) of the NRC Authorization Act for fiscal years 1982 and 1983 sheds little light as to Congressional intent. These sections were introduced as a floor amendment in the Senate (128 Cong. Rec. S. 2488, [daily ed. March 22, 1982]), no hearings thereon were held in either house, there is no committee report except for a brief summary in the Conference Report on the Act (H.R. Report No. 97-884, 97th Cong., 2d Sess. [1982], pp. 39-41), and the Congressional debate was very limited. As a result, although Section 13 (b) lists five alternatives that Congress required to be studied, it is unclear what specific problems each alternative was intended to address, whether each alternative is intended to address a different Congressional concern, what information indicated that each alternative had potential merit, and what is intended to be within the scope of some of the more ambiguous alternatives.

Particularly in view of the ambiguities in the Congressional mandate, we suggest that the Commission's study should, at a minimum, address the following aspects of each of the five alternatives:

- (1) The Commission's perception of the specific problems that such alternative was intended to resolve;
- (2) The Commission's understanding of the scope of each alternative and of the various mechanisms that it believes could be used to implement such alternative;
- (3) The Commission's views as to the potential benefits and disadvantages of such alternative (including the various mechanisms studied); and
- (4) The Commission's estimates of the manpower and financial resources that would be required for implementation of such alternative by the Commission and licensees, as well as potential impact on construction schedules.

We will be able to provide more focused comments when, as suggested in our letter, the Commission makes available its tentative views on the foregoing matters. Nevertheless, we have set forth below some preliminary comments concerning each of the five alternatives.

Alternative 13 (b) (1)

Section 13 (b) (1) requires analysis of "adoption of an approach which is more prescriptive than that currently in practice for defining principal architectural and engineering criteria" in order to provide a basis for quality assurance and quality control, inspection, and enforcement actions. Congress did not identify any specific defects in the present "basis for quality assurance and quality control, inspection and enforcement actions" nor how a "more prescriptive" approach to architectural and engineering criteria would remedy any such defects. */

We strongly believe that principal architectural and engineering criteria should not be made more prescriptive. Several years ago, the Commission published an Advance Notice of Proposed Rulemaking (45 Fed. Reg. 81,602, December 11, 1980) concerning alternative proposals for regulatory amendments to define more clearly the limitations on construction permit holders to make changes in a facility during construction. One of the alternatives mentioned was the development of a more explicit definition of "principal architectural and design criteria." As was pointed out in comments submitted on our behalf, if such alternative were to be applied to existing construction permit holders, it would create numerous unnecessary licensing reviews, invite endless litigation and potentially seriously disrupt construction, all without significant benefit. (See pp. 9-12 of attachment to letter dated February 9, 1981 to Mr. Chilk from Mr. Powell of Lowenstein, Newman, Reis and Axelrad.)

The Commission has considered adopting such definition since 1969. Public comments have emphasized that any definition would of necessity be so broad and inclusive as to require that the design of the facility be complete at the construction permit stage, unless an applicant were willing to continually apply for amendments. A 1977 Staff study proposing to develop these criteria based upon the Standard Review Plan estimated that a final list would contain more than seven hundred "principal architectural and design criteria." The added regulatory burden inherent in this approach would stand in stark contrast to the Commission's current proposals to limit the coverage of technical specifications in operating licenses in order to minimize unnecessary NRC review of changes, which impose a significant burden on both licensees and NRC Staff without a corresponding health and safety benefit.

*/ Related Congressional statements are not very helpful, nor necessarily consistent. Senator Ford spoke of adopting "narrower definitions of principal architectural and engineering criteria . . ." (S. 2489) Senator Simpson referred to "a more precise approach to defining criteria for plant construction, similar to the technical specifications that are now developed for plant operation . . ." (S. 2491)

Whatever benefits such prescriptive criteria would achieve -- and we see very little -- would be particularly far outweighed in instances where the permittee has filed an FSAR. In such circumstances, only meaningless labor and potential delays would result from forcing the permittee and the Staff to laboriously produce and review a lengthy list of criteria containing no substantive information other than that already filed in the FSAR. It appears that the Commission agreed that this approach was not beneficial since it has taken no action in furtherance of the advance rulemaking noticed in December, 1980.

If the NRC is to proceed to a single step licensing process for the combined issuance of a construction permit and operating license, perhaps one result of that process could be a prescriptive list of "Principal architectural and design criteria." Within the framework of the existing regulatory process, however, such a system would inevitably disrupt design and construction, significantly increase costs to permittees and applicants, and divert both the permittee and the Staff from other, more important duties, without making any additional contribution to public health and safety.

Accordingly if the Commission believes that there is any need for an improved basis for quality assurance and quality control, inspection and enforcement actions -- something of which we are not aware -- we strongly urge that it identify a different alternative for providing such basis and include discussion thereof in its study.

Alternative 13 (b) (2)

Section 13 (b) (2) requires analysis of conditioning the issuance of construction permits on a demonstration by the licensee that it "is capable of independently managing the effective performance of all quality assurance and quality control responsibilities for the power plant."

It is unclear whether this alternative contemplates a change in the NRC's requirements pertaining to how a licensee demonstrates its capability for managing quality assurance and quality control responsibilities or whether the focus of the inquiry is to be on the licensee's capability to manage these responsibilities "independently" (i.e., presumably with lesser reliance on the capabilities of its contractors and consultants).

The ambiguity in this alternative makes it particularly important that the NRC describe its understanding of the intent of the alternative and identify the mechanisms that it believes could be used to achieve that intent.

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If the NRC focuses on consideration of more explicit mechanisms for "demonstration" of a licensee's capability for managing quality assurance, it should examine whether a need exists for such enhanced demonstration and carefully balance the benefits and costs of each mechanism considered.

If instead the NRC focuses on whether the licensee should be able to manage quality assurance "independently", it should structure its study broadly so as to avoid the mistaken assumption that any single framework of utility-contractor relationships is universally preferable. Thus the NRC's review should include the variety of approaches that have been successfully employed in nuclear projects in order to assure that it does not inadvertently wind up with results that would discourage any licensee from utilizing the approach that may best suit its particular circumstances.

Alternative 13 (b) (3)

Section 13 (b) (3) requires analysis of evaluations, inspections or audits by organizations comprised of experts in appropriate fields. Senator Simpson identified INPO, IEEE and ASME as examples of the types of organizations Congress had in mind. (Cong. Rec., S. 2491)

Licensees have recognized the potential advantages of evaluations, inspections or audits performed with the involvement of organizations with appropriate expertise. The prime example is Phase 2 of the INPO program which will begin in May of this year. We know that the Commission is well aware of this program, having received a briefing from INPO officials and involved utilities at its meeting on March 11 and having heard from the NRC Staff on the potential relationship between the INPO and NRC programs on March 14. We commend the Commission for its previous efforts to integrate the INPO program into the overall regulatory framework, but we urge that continuing steps be taken to avoid unnecessary duplication of inspection and auditing activities.

We have no suggestions for any evaluations, inspections or audits by any other professional organizations that would merit consideration. If the NRC has any additional external evaluations, inspections or audits in mind, it should identify them and their scope and purpose, so that comments can be submitted on their potential benefits and problems.

Alternative 13 (b) (4)

Section 13 (b) (4) requires analysis of improvements of the Commission's organization, methods and programs for quality assurance, development, review and inspection.

We have no suggestions for specific improvements to be considered by the Commission.

However, we are aware that the Commission has recently undertaken a number of initiatives relating to its quality assurance program for plants under construction. (See, e.g., SECY-82-352 and transcript of Commission meeting of September 29, 1982.)

We believe that the Commission would receive a number of constructive public comments if it would issue a summary of the initiatives it has underway and those it has under consideration, as well as the reasons for such initiatives and the potential benefits perceived by the Commission.

It would be useful to have the NRC prepare an analysis of the results of its initiatives that have been in effect for a meaningful period, including a discussion of whether the anticipated benefits have been achieved.

We understand that the Commission will also be reviewing the quality assurance programs of other Federal agencies. Such review may provide useful background information. However, it is doubtful that the program of any other Federal agency involves circumstances similar to the complex and highly regulated environment of nuclear power plant construction. It will therefore be important not to import into the present regulatory framework any practices from other areas that may have superficial appeal without intensive review of their potentially disruptive impacts. For example, we have serious reservations about the usefulness of adding to the nuclear power plant construction program features analogous to the FAA's "designated representative" program discussed in SECY-82-352.

Finally, with respect to any improvements in NRC programs given consideration, we again urge that the Commission carefully examine whether any unnecessary duplication of either NRC or licensee efforts would result.

Section 13 (b) (5)

Section 13 (b) (5) requires analysis of conditioning the issuance of construction permits on the permittee entering into arrangements with an independent inspector for audits that would verify quality assurance performance.

This alternative appears to be similar to section 13 (d) (3), although the emphasis seems to be on verification of quality assurance performance rather than evaluations, inspections or audits of plant construction.

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Again, review of the INPO programs (Phase 1 as well as Phase 2) would appear to be a useful part of this analysis, as well as review of the varieties of inspections and audits performed for licensees as part of the Independent Design Verification Program.

Whatever types of independent inspections are considered by the NRC, they should all be measured by how they would fit into an efficient regulatory framework and how they would be utilized to avoid unnecessary duplication of efforts by licensees and the NRC.