



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

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February 18, 1982

MEMORANDUM FOR: Edward S. Christenbury, Hearing Division Director
and Chief Counsel, OELD

FROM: Gus C. Lainas, Assistant Director
for Safety Assessment, DL

SUBJECT: APPLICABILITY OF GENERAL DESIGN CRITERIA AND OTHER
REGULATIONS TO OLDER LICENSED POWER REACTORS

The purpose of this memorandum is to request guidance on the degree of compliance required by the oldest licensed power reactors with regulations promulgated after the licenses had been issued.

Discussion:

Members of Operating Reactors Branch #5 and Systematic Evaluation Program Branch have been involved for several years in evaluating eleven of the oldest licensed power reactors as part of the Systematic Evaluation Program (SEP). These evaluations have included comparisons between the plants as they currently exist and the requirements set forth in the regulations, as interpreted by the Regulatory Guides and the Standard Review Plan, in order to determine the extent to which these older reactors deviate from current licensing criteria.

Correction of most deviations will be resolved during an Integrated Assessment of each plant at the end of the SEP. In cases where the degree of deviation has been very great, the staff has attempted to have licensees agree to institute modifications which would bring the power plants closer to, if not completely into, compliance with current criteria. However, with regard to certain of topics under review, licensees have displayed extreme reluctance to agree to the fixes requested by the staff, and the staff would prefer to be able to convince licensees that they have to meet requirements in the regulations rather than issue orders. Several examples are listed below:

1. Inclusion of a set of "General Design Criteria" into the regulations was proposed in the Federal Register on July 11, 1967 (32 F.R. 10213) and adopted on February 20, 1971 (36 F.R. 3256). The statement of considerations in the proposed rule stated that:

"The purpose of the proposed amendment would be to provide guidance to applicants in developing the principal design criteria to be included in applications for Commission construction permits. These General Design Criteria would not add any new requirements, but are intended to describe more clearly present Commission requirements to assist applicants in preparing applications (emphasis added)."

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The introduction to Appendix A itself states that:

"These General Design Criteria establish minimum requirements for the principal design criteria for water cooled nuclear power plants similar in design and location to plants for which construction permits have been issued by the Commission."

The change which incorporated the GDC into the regulations only affected the regulation §50.34, relating to applications for construction permits. Nowhere else in the regulations were changes made to require previously licensed reactors to be backfit to meet all of the General Design Criteria (GDC). In fact, we have been able to identify only one regulation, §50.44, which specifically states that operating reactors must meet the requirements of a GDC, and §50.44 only identifies GDC 41, 42 and 43 as the criteria to be satisfied.

Power plants which are yet to be licensed must clearly show how they comply with the GDC, or must provide adequate justification for deviations. However, it is not clear whether plants which received full-term licenses as early as 1972 must backfit to comply with the GDC. True, 10 CFR 50.54(h) states that a condition of a license is that it is "... subject to the provisions of the Act now or hereinafter in effect and to all rules, regulations and orders of the Commission." But in the absence of a regulation specifically requiring that currently licensed plants comply with the GDC, such licensees would appear to be required to show compliance with the GDC only if they were to request a new construction permit.

2. Part 100 of the regulations establishes siting criteria for new reactors and Appendix A to Part 100 establishes the seismic and geologic criteria for nuclear power plants. The siting criteria were incorporated into the regulations in April 1962, and the seismic criteria were incorporated in November 1973. This was after several nuclear power plants had been built and after several full-term operating licenses had been issued. Once again, the "Purpose" section of Appendix A states that:

"It is the purpose of these criteria to set forth the principal seismic and geologic considerations which guide the Commission in its evaluations of the suitability of proposed sites for nuclear power plants and the suitability of the plant design bases established in consideration of the seismic and geologic characteristics of the proposed sites (emphasis added)."

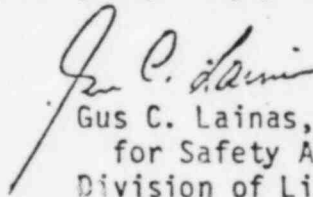
It would, therefore, appear that the requirements identified in Appendix A deal only with proposed sites and are not applicable to sites licensed prior to this regulation.

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The only regulation which might be remotely construed as requiring compliance with these criteria is §50.90, relating to the application for an amendment to a license. This paragraph states that applications for amendments to a license shall "follow ... as far as applicable the form prescribed for original applications." A very literal reading of this regulation could be interpreted to imply that a licensee must show compliance with all current licensing requirements in all areas whenever any request for a license amendment is made, no matter how small or inconsequential the amendment. The current practice is to review the particular amendment request against the current requirements, and to ensure that the requested changes conform to current criteria, but no effort is made to review related areas. The effort required to do such a review would be immense and would result in unreasonable delays in processing amendment requests.

Therefore, in light of the fact that some new regulations, such as 10 CFR 50.46 (ECCS requirements), Appendix I (ALARA) and Appendix R (Fire Protection) have specifically included older facilities, a legal opinion is needed on the following question: "Are operating reactors legally required to meet the Regulations including the criteria established in the GDC and in 10 CFR 100, Appendix A, if these requirements were promulgated after the reactors were licensed?"

Because of the pace of the SEP, your prompt reply would be appreciated.



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