

ADVISORY COMMITTEE ON REACTOR SAFEGUARDS
United States Nuclear Regulatory Commission
Washington, D. C. 20555

January 21, 1975

Honorable William A. Anders
Chairman
U. S. Nuclear Regulatory Commission
Washington, D. C. 20555

Dear Mr. Anders:

In considering the future role of the Advisory Committee on Reactor Safeguards in support of NRC activities, the ACRS has reaffirmed the need for expeditious passage and implementation of the nonmandatory review requirement of Section 29 of the Atomic Energy Act. This change in the Committee's Charter has been proposed by the Committee on several occasions, most recently in a letter to the Honorable John A. Pastore, dated April 14, 1972 (copy attached), and the testimony of Dr. William R. Stratton, ACRS Chairman, during the JCAE Hearings on Nuclear Power Plant Siting and Licensing, on April 24, 1974 (copy attached).

The Atomic Energy Commission endorsed this change in the Act and this proposed change in the legislation was last forwarded to the Congress for action during 1974.

The ACRS reaffirms the need for this legislative change for the reasons noted in Dr. Stratton's testimony and requests that this change be forwarded for Congressional action as soon as practical.

In addition to this change, it is suggested that, as soon as practical, the Congress also be requested to amend Section 201(g)(1) of the Energy Reorganization Act of 1974 (P.L. 93-438) by inserting, "The Advisory Committee on Reactor Safeguards." This section would then read as follows:

Sec. 201(g)

- (1) The Advisory Committee on Reactor Safeguards;
- (2) The functions of the Atomic Safety and Licensing Board Panel"

Honorable William A. Anders

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January 21, 1975

The statement by Senator Ribicoff (Congressional Record S19016, dated October 11, 1974) indicates that, ". . . this transfer was agreed to by the conferees, but because of an oversight it was omitted from Subsection 201(g)(1) of the act."

Sincerely yours,



W. Kerr
Chairman

Attachments

- [*] 1. Copy, Ltr from Dr. C. P. Siess, ACRS, to Hon. John A. Pastore, JCAE, dated April 14, 1972, Subj: "AEC Proposed 'Discretionary ACRS Review' Legislation . . . "
- 2. Copy, Testimony of Dr. William R. Stratton, ACRS, before the JCAE on April 24, 1974

[*] See pages 2741-2742, Volume V

TESTIMONY OF

Dr. William R. Stratton, Chairman
Advisory Committee on Reactor Safeguards

Before The

JOINT COMMITTEE ON ATOMIC ENERGY

REGARDING

NUCLEAR POWER PLANT SITING & LICENSING LEGISLATION

April 24, 1974

The principal matter that the ACRS wishes to address in this testimony is that of the so-called mandatory review requirement of every facility as specified in Section 182b of the Atomic Energy Act. To provide background for this testimony I will present some information as to how we have been allocating our time, the Committee's work load now and as we see it in the future, and some thoughts on how we might implement a change in the law. In addition, I will make a suggestion apropos the ERDA-MEC (NSLC) legislation.

Very briefly, the position of the ACRS on the review of projects is that full review of every application by the ACRS will not be required as standardization of nuclear plants becomes a reality, and some flexibility in ACRS review of projects should be provided at this time. The ACRS stated its position in this regard in the testimony by Dr. Spencer H. Bush, then Chairman, and Dr. Joseph M. Hendrie, past Chairman, at the hearing before the Subcommittee on Legislation on June 27, 1971. This position was again reiterated in a letter to Senator John O. Pastore, Chairman, JCAE, from Dr. C. P. Siess, Chairman of the ACRS, dated April 14, 1972.

The ACRS continues to support this previously proposed legislation which provides, "That unless the Commission specifically requests a review and report on an application or portion thereof, the Committee may dispense with such review and report by notifying the Commission in writing that review by the Committee is not warranted". The letter to Senator Pastore and the suggested wording for Section 182b are included as an Appendix to this report.

The ACRS believes that it should have the authority to make a review when it considers that a review is appropriate. The Commission would also have this authority under this proposed change in the law. This provision would preclude any appearance of lessening the independence and input of the ACRS in its role of protecting and assuring public health and safety. The suggested wording would permit the ACRS to change its procedures in an orderly and gradual fashion and would lead to new procedures that would be consistent with its role as envisaged in the legislation establishing the ACRS.

A change which was foreseen a few years ago and which is occurring now is the "standardization" of nuclear power plants. The word "standardization" is used with some reservation since structures as large, expensive, and complicated as modern power stations can never be as similar as a series of commercial airliners, for example. The site of a plant necessarily introduces differences and the permutation of utility, NSS vendor, architect engineering firm, as well as site mean that truly identical plants will be few and far between. Nevertheless the Committee has twice combined reviews of plants which incorporated the same nuclear steam supply system and for which the timing of the combined reviews was practical. One case, for an operating license, involved three utilities with a total of four reactors, while more recently a construction permit review involved two utilities and five reactors. The time saved during our meeting was considerable and we foresee more such possibilities in the future.

A measure of work expended on projects and work on general matters can be obtained by counting subcommittee meeting days on the several subjects. These data for the past six years show that close to half (42% to 57%) of the subcommittee effort is expended on projects and about half is expended on safety guides, criteria, technical issues, and reactor safety research matters. These data are included in Table I, attached. Thus, about half of our time is expended on what would be called generic matters. I estimate that during full Committee meetings, the allocation of time would indicate relatively more effort on reactor projects, perhaps as much as two-thirds, but specific time records have not been maintained during our meetings.

Thus, the ACRS already is expending about half of its available time on general issues important to safety. Examples include: pressure vessel integrity, anticipated transients without scram, emergency core cooling systems, reactor fuels, provisions for protection against industrial sabotage, and many others. I expect that generic matters will continue to be of major interest for some time in the future.

The Committee believes that project reviews are necessary to keep current in the latest developments in reactor technology and believes that the number of project reviews per year that is appropriate will depend on a number of qualitative as well as quantitative matters. On the other hand, the Committee believes that its generic reviews have been very useful in helping to focus needed attention on appropriate matters and providing some guidance to the industry in safety matters.

In view of the projection for nuclear power plant construction, some flexibility in the requirements for formal review is needed. The ACRS believes that by relaxing the mandatory provision and by combining reviews of standardized plants, the project case load can be accommodated without impairing the current level of safety and about the same effort on general matters can be sustained.

The ACRS and AEC have not yet developed detailed procedures to implement non-mandatory review but some thought has been given to this question and more will be needed. I personally believe that it would be much better to accomplish a gradual transition to the new status and to develop these procedures over a period of time. The ACRS believes that a review of each project probably is necessary; selected projects could receive an abbreviated review, others would receive a more nearly standard review. The abbreviated or shortened review could be, for example, a subcommittee examination of the plant and regulatory staff evaluation, or a Committee discussion of the plant without asking for attendance by the applicant and regulatory staff, or a subcommittee might ascertain that only very selected areas would warrant the attention of the full Committee. A number of possibilities can be imagined.

The second matter that the ACRS wishes to bring to your attention is connected with the proposed legislation that will create the ERDA and the NEC. The Committee believes that the provisions governing the safety review of ERDA reactors by NEC may be too limited and that some provision for a review to take place at the request of ERDA would contribute

positively to public health and safety. A current example is that of the FFTF and the Clinch River IMFBR Demonstration Plant. The former is a research reactor and would not be reviewed under the proposed legislation, while the latter will be connected to the electrical grid of the TVA and will be reviewed. However, the two reactors are not unrelated; the same reactor vendor is designing and constructing the reactor core, and many components are of common design or developmental pattern. I have no doubt that aspects of safety philosophy will be common to both plants and not necessarily coincident with regulatory safety philosophy unless regulatory input occurs early in the process. A regulatory safety review of the smaller plant could be very beneficial to design and construction of the larger demonstration plant, and later commercial designs, as well as providing a useful exchange of safety related views.

Thus, the ACRS recommends that the proposed legislation provide specifically for this relationship between the ERDA and the NEC. In addition, specific provision for ACRS review of ERDA facilities should be included in the legislation that establishes these two agencies as indicated in House Report 93-707 (pages 26 and 34).

Section 202 of H.R. 11510 specifies review by NEC of ERDA demonstration reactors which operate as part of the power generating facilities of an electric utility system. Because other commercial applications of nuclear reactors are possible, the ACRS respectfully suggests an added subsection in 202 (H.R. 11510) to provide that other demonstration nuclear

reactors be reviewed by NEC when constructed for the purpose of, or when operated in a manner to establish, the commercial viability of the production of process heat, the desalinization of water, or any other physical or chemical process that may have commercial application.

To summarize, the major matter the Advisory Committee on Reactor Safeguards wishes to bring to your attention is that of the mandatory review provision in Section 182b of the Atomic Energy Law. The ACRS proposes provision such, "That unless the Commission specifically requests a review and report on an application or portion thereof, the Committee may dispense with such review and report by notifying the Commission in writing that review by the Committee is not warranted".

A second matter the ACRS wishes to bring to your attention is a possible omission in the proposed ERDA-NEC legislation. The ACRS believes that the provisions regulating the NEC and ACRS review of ERDA reactors needs to be stated specifically.

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