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NEW CHALLENGES FOR A UNIQUE COURT

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I am very pleased to have been invited to take part with you in this twenty-fifth Annual Meeting of the Atomic Safety and Licensing Board Panel. I am proud that I was a part-time Member of the Panel for more than 10 years. The Panel is unique among adjudicatory bodies: Nowhere else in the federal judiciary -- no where else in American courts or in the world, as far as I know -- do scientists and engineers sit as judges. Here is a remarkable combination of roles: the scientist and the judge. We know that not everyone thinks that the combination is good, or that legal process is suited to the resolution of technical issues. I don't agree, and I'll have more to say on this in a few minutes.

As you know, it took a special provision in the Atomic Energy Act to make the combination of scientist and judge possible. The use of nuclear materials has always been viewed in our legal system as calling for special treatment and special arrangements, beginning with Congress' decision soon after World War II to leave it to the AEC, and then the NRC, to determine what constitutes "adequate protection" of the public health and safety. Congress may not like some of our standards -- for example, our much-maligned BRC policy -- but, in the spirit of one of Reno's pastimes, I'll wager you'll never see Congress take a risk and set its own BRC standard, or any nuclear safety standard. It's safer to let us be the fall guys. And maybe Congress shouldn't set such standards. Maybe technically competent people, accountable to the Courts, Congressional oversight, and the international scientific community should set the standards. Whatever the "shoulds" here, the NRC has a technically and politically difficult job to do, and the Panel is an indispensable part of getting that job done. It is inconceivable that the Commissioners themselves could have conducted all the hearings that the licensing boards have conducted.

The agency is entering a new period now, a time during which far-reaching decisions about the future of nuclear power are going to be made. You have done right this week to concentrate on judicial skills and on the new plant designs, because your role in these decisions is going to be crucial.

For the next twenty minutes or so, I would like to share with you some thoughts on your role in these decisions, and on the new designs themselves. I will be saying some general things about the combination of scientist and judge, and then I will comment more

particularly on what the Licensing Panel will be doing in the certification of the new designs. To some extent my remarks will be a continuation of discussions I've had with you on other occasions. Incidentally, I've heard that the best way to stay awake during an after dinner speech is to deliver it. I'm all set, but you're on your own. First, consider with me for a few minutes the uniqueness of having scientists and engineers sit as judges.

Usually they sit in the classrooms, laboratories, libraries, and the like. Sitting on the bench feels strange, for several reasons. For example, the rules of evidence, which you have been studying this week, are not the rules by which experiments and tests are designed, or their results evaluated: As far as I know, in the laboratory or test facility, there are no exceptions to the rule against "hearsay," because there is no need for hearsay in the first place.

Also, scientists and engineers are accustomed to active inquiry, to following up on a grand hunch, working hard to build a record which confirms or disproves that hunch. But a judge is supposed to be neutral -- until the moment of decision, he is something of an umpire, watching others build the record, calling balls and strikes making sure the game is played according to the rules.

Uncertainty in evidence in a court of law is treated -- at bottom forgotten -- through the device of presumptions, so that there will be a winner and a loser on every issue. But in science, uncertainty in the evidence is measured and resolved if possible, and the interpretation of the evidence is as hesitant and inconclusive as the uncertainty requires.

Legal reasoning is certainly not scientific reasoning: Legal definitions are generally not as clear as definitions in science. Legal precedents are not as axiomatic as the postulates of a science. Legal argument is seldom as extended or as sure as argument in science. And, of course, as your sessions on opinion writing here at the National Judicial College must have brought home to some of you with renewed force, a judicial opinion bears little resemblance in style and tone to a scientific paper.

Some people take these differences to be signs of inferiority in the law, and they conclude that technical issues should not be litigated. A few of my former colleagues on the Advisory Committee for Reactor Safeguards have been of this opinion. The Committee's own procedures are much more familiar to the scientist and engineer than the Panel's procedures.

However, I do not agree with this opinion. I see a very important place for both approaches in the resolution of public questions involving technical issues.

I spoke to you about the ACRS at your annual meeting two years ago.

I consider myself fortunate to be among the very few who have been members of both the Committee and the Panel. Let me add a bit to my discussion of two years ago by comparing briefly the different working methods of the two organizations, and the different contributions the two make to the Commission's decisions on power plant designs. But first let me indicate that there are commonalities as well as differences between the Panel and the Committee. One commonality is the distinguished level of the members. Another is the excellent opportunity both offer for individuals from different disciplines to learn from one another. In the case of the Panel, there is the added dimension of legal and technical members' learning from one another, which I found stimulating.

Let me turn now to the differences between the approaches of the Committee and the Panel to technical issues. Typically, the ACRS sees all the technical material the Commissioners see and then some. The Committee reviews both particular designs and general rules and policies. It also takes up any

reactor-related technical issue it wants to, whether or not the staff or the Commission is considering the issue. The Committee's record on any issue consists in large part of answers to questions posed by the Committee. Its procedures are informal in the extreme; although its meetings are fully public, the atmosphere in which it works is neither adversarial nor political (though it is heated sometimes); and it need fear neither court nor congressional oversight committee.

From this wealth of information and background, and in the freedom of its surroundings, the Committee's advice, not surprisingly, is swift, brief, and dangerous to ignore. To every one of these characteristics, the licensing boards present a contrast. The boards focus on parts of designs. Through precedent, the boards develop something like substantive rules, but precedent does not have the fixity of rule, and its scope isn't as broad as the body of rules and policies the ACRS sees. Except for the occasional use of their sua sponte authority, the boards decide nothing about a design except what is brought to them by intervenors or, on rare occasions, posed by the Commission. Even for the issues the boards do consider, the boards depend largely on the litigants to build the record, although I realize completely that the boards cannot always depend on the litigants to build the record fully. The boards' procedures are highly formal. The hearings are adversarial, and take place under the watchful eyes of the courts. The boards' decisions are necessarily long and detailed, and therefore take a long time to write, and, because they are not advisory, cannot be ignored.

In large part, the differences between the work of the ACRS and the work of the Panel come to this: The Committee deals with the technical issues posed by designs, but the Panel deals with

technical issues posed by members of the public who care enough about those issues to exercise their right to a hearing.
Both the Committee and the Panel do what the Commission could not do. The Commissioners could not possibly review designs to the same depth, nor with the same freedom, as the ACRS does. Nor could the Commission take the time to build a record and resolve the detailed issues raised by intervenors.

I doubt that anyone is more exacting in its approach to design issues than the members of the Panel are. I recall from my time with the Panel how useful cross-examination was sometimes for getting to the heart of an issue. I therefore have consistently opposed legislative efforts to prohibit the Commission from using cross-examination in the preoperational hearing for which the new Part 52 provides an opportunity.

These important differences between the ACRS and the Panel are already showing themselves in the agency's review of the new standard designs you have been discussing yesterday and today. The ACRS played a part in the drafting of the information requirements for design certification under Part 52 and has continued to play a part in the Commission's implementation of Part 52's requirements on the level of design detail in applications for certification. The Committee has advised the Commission on a range of substantive safety issues concerning future designs and on the staff's draft reviews of the new designs.

The Panel's work on these new designs, on the other hand, is still to come, though not so far in the future that your efforts during this annual meeting to become more familiar with Part 52 and the new designs are wasted.

When your work on the new designs begins, you will, as so frequently in the past, find yourselves in the thick of highly public controversy. I cannot promise you that design certification hearings will be more heated than the Shoreham and Seabrook hearings were, but imagine litigating a whole design meant to define an entire class of plants. Consider also that some of the standards in Part 50 may not be relevant to the design, and thus, until new generic standards are promulgated, the design certifications themselves will be the new standards -rules, in fact, albeit design-specific. The stakes will be high, and so you can expect vendors and public interest and environmental groups to be well-prepared and to present a technically highly literate case. These hearings should be exciting, but you must be cognizant of the fact that these are not the CP or OL hearings of the past, per se. As if all this weren't enough to whet your judicial appetite, the Commission added to the interest of your work by building into Part 52 a kind of presumption that the certification hearings would be informal, somewhat after the model of 10 CFR Part 2, Subpart L. There would be some opportunity for cross-examination, in limited

circumstances.

This presumption of informality has been the subject of some discussion over the last three years, and you and I discussed it some when I met with some of you last June. I'd like to continue that June discussion briefly now, because the informality of a design certification hearing may turn out to be one of the most challenging aspects of the hearings for you, and I would like you to understand what I believe the Commission was aiming at when it chose in favor of informality.

The debate over informal procedures too often becomes a debate about whether informal procedures are really going to mean shorter hearings, or whether an opportunity to cross-examine one's opponents isn't almost a God-given right of all Americans.

I don't believe that the main aim of informal procedures is either short hearings or a ban on cross-examination. I don't know that the Subpart L hearings you've held are distinguished for their brevity nor as I said a little earlier, do I support efforts to prohibit cross-examination absolutely (although, having been trained as an engineer, I do not think that cross-examination is the only way to truth; questioning is indispensable, but cross-examination which is too adversarial has little to do with real questioning).

When the Commission promulgated Subpart L, the Commission articulated the primary reason for informal procedures.

Essentially, the informal hearing is designed to elicit information and resolve issues primarily through inquiry by the presiding officer rather than through an adversarial confrontation between the parties.

... [T]he Commission has attempted to enhance the role of the presiding officer as a technical fact finder by giving him or her the primary responsibility for controlling the development of the hearing record beyond the initial submissions of the parties...

(54 Fed. Reg. 8269-70, Feb. 28, 1989.) In other words, the licensing board in an informal hearing will function a little more like the ACRS, a little more after the fashion of scientists and engineers.

As I've said, cross-examination has its uses, but it is not for every purpose. During the rulemaking on Part 52, several commenters argued that the certification hearings should be formal adjudications because, in the commenters' opinion, cross--examination was an unsurpassed means for discovering the truth. The Commission replied that the argument proves too much, namely, that

every rulemaking, indeed every species of lawmaking, should be formal adjudication. Part 52 does not assume the superiority, or even the usefulness, of formal procedures for resolving every issue; ....

(54 Fed. Reg. 15376, April 18, 1989.) Just as the Commission doesn't want to be told by one side in Congress not to cross-examine, so also the Commission doesn't want to be told by the other side that there must always be cross-examination. It is important to remember that the Commissioners bear the ultimate responsibility for the record in a hearing, and so they want to be able to choose the means they believe appropriate for building the best record. For the certification hearings, the Commission has chosen to give you a very large role in building the record. Incidentally, when I say "you," I mean each of you serving equally on a board. The board, not just the chairman of the board, is the presiding officer. The chairman is given specific responsibilities because of his or her knowledge of administrative proceedings. But each of you has an equal responsibility, and a near equal authority, for the conduct of the hearing, the building of the record, interlocutory decisions, and the final decision.

Let me change my focus briefly now from the hearings to the designs you'll be considering in those hearings. At some modest risk of prejudicing you on a few points, I'd like to discuss a topic which has been near and dear to your hearts in several licensing proceedings and which promises to challenge you again in proceedings on combined licenses.

I refer to emergency planning, a subject which has strained federal-state relations, provoked bills that would change the responsibilities of more than one agency in the executive branch of the federal government, spawned whole lines of case law in administrative law, delayed the license for one nuclear power plant and stopped one licensed nuclear power plant from being operated, and affected the political careers of at least three governors. The subject is receiving some international attention right now. This past September, I participated in an IAEA-sponsored conference in Vienna entitled the "International Conference on the Safety of Nuclear Power." The conference, which was attended by representatives from more than 40 countries, considered several topics concerning the protection of individuals, society, and the environment against radiological hazards of nuclear power. One of the topics considered at the conference was the role emergency planning should have in the future designs of nuclear reactors.

The conference participants concluded that advanced reactor designs will incorporate design features that will permit the technical demonstration of adequate public protection with significantly reduced emergency planning requirements.

However, there were some representatives who expressed the view that without completely eliminating the need for emergency planning, nuclear power plants will not be developed in their countries in the future.

It is natural to wish that a matter of such longstanding and expensive controversy might eventually become unnecessary. I do believe that the level of emergency planning can be reduced as reactor designs progress. I also believe that the designers of advanced reactors should take into consideration emergency planning as a part of their design process. They should strive to reduce the need for emergency measures in the event of nuclear accident, just as they should stay alert generally to the possibilities for reducing risks and exposures.

However, I do not believe that emergency planning will be eliminated for nuclear facilities, regardless of how advanced future reactor designs might become. "Adequate emergency planning is 'essential,"' the Commission said not too long ago, ... just as adequate lifeboats are essential for a liner carrying passengers at sea. But it is only common sense to acknowledge that emergency plans, like lifeboats, are a backstop, a second or third line of defense that comes into play only in the extremely rare circumstances that engineered design features and human capacity to take corrective action have both failed to avert a serious mishap.

The hope of getting along without emergency planning is reminiscent of an earlier hope, now recurring, that containments would be unnecessary. Years ago, the ACRS urged the building of substantial containment structures for our nuclear plants, even though some argued that these were expensive and unnecessary appendages that did little more than cause additional public concern. Even now, the DOE-supported modular high temperature gas reactor does not include a containment structure. This innovative design shows considerable promise for passive safety improvements. However, without containment or other mitigating features, I believe that it will face considerable public opposition and will introduce major and important policy decisions for the Commission.

In my opinion, the new designs generally speaking display a rising standard of professional excellence, but I am concerned that efforts to reduce cost may be causing designers to forget certain lessons we've learned. Cost control is a legitimate engineering effort, but it must not be at the expense of prudent and adequate protection of public health and safety and the environment. We must not forget that the containment at TMI worked. Perhaps we should not require a similar demonstration of the importance of emergency planning before we are persuaded to use emergency planning for the new designs too.

In closing, let me say that we stand at a crossroads. Nuclear power now accounts for about 20% of the electricity generated in the United States. It will be difficult to replace, because the most

likely candidates for replacing nuclear power carry considerable political and environmental risk. Under the President's National Energy Strategy, the government will leave it to the market to choose whether to build more nuclear power plants. The government will seek only to make sure that the nuclear option is available to the market. The government hopes
to accomplish this by maintaining exacting safety and design standards, by reducing the economic and regulatory risks of building nuclear power plants, and by establishing an effective high-level nuclear waste program. Not too many more

years will pass before we know whether the government has been successful, and what option the market has chosen.

Nuclear power has carried us down paths we probably would not have gone otherwise. In addition to the electricity that nuclear power has generated, in addition to the pride in engineering accomplishment it has been the occasion for, nuclear power has inspired new techniques of assessing risk, it and the controversy surrounding it have tested our legal system, and they have called upon every bit of capacity we have for rational debate.

Not least among the things which nuclear power has helped bring us to is a unique adjudicatory body. Whether the nuclear option is chosen for another generation or not, the work you are doing here will be of considerable importance to the Commission and the nation.

The challenges the Panel has faced in the last 30 years, and the accomplishments of the Panel in facing those challenges, have been extraordinary, unprecedented in the history of the administrative judiciary; but the challenges ahead very likely will prove even greater.

I have every expectation that your accomplishments also will be even greater, with the result that respect for the decisions of this agency will continue to grow in the eyes of the rational members of the public.