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REMARKS BY
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U.S. NUCLEAR REGULATORY COMMISSION

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CONFERENCE OF RADIATION CONTROL PROGRAM DIRECTORS, INC.
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COOPERATION WITH THE STATES: MAKING IT WORK

Thank you very much for inviting me to join you this morning. It is an honor and a pleasure to be here. Since I've known many of you from my tenure at the Department of Energy's Environmental Measurements Laboratory and have had the opportunity to meet more of you since becoming a Commissioner, I have been looking forward to coming to this meeting.

I bring you the greetings of Chairman Selin and my fellow Commissioners. I want to especially thank Michael Mobley, Chairman of the Conference, and Mary Clark of the Florida Program, the host of this meeting, as well as the many individuals who have contributed to the success of the meeting.

Let me tell you a little bit about myself and share a few views and impressions that I have of the Commission and then turn to the subject at hand today.

In terms of academic credentials, I have had a very interesting and mixed background. I have a Bachelor's degree in mathematics, a Master's in physics, and a Ph.D. in environmental health sciences. Right after I received my Bachelor's degree, I joined what was then called the Health and Safety Laboratory, or HASL, of what was then the Atomic Energy Commission, located in the Greenwich Village/SOHO section of Manhattan. I started as a research physicist doing work principally in radiation shielding

and dosimetry and environmental radiation. Over the years there were several name changes from AEC to ERDA to DOE and from HASL to the Environmental Measurements Laboratory (EML). I eventually became deputy of that organization and, finally, the director. From there I came to my position as Commissioner.

As many of you know, I have been active in many professional societies especially the Health Physics Society and the American Nuclear Society, of which I served as President from 1988 to 1989. I've also had the good fortune to travel extensively, both as part of my work at the Environmental Measurements Laboratory and in connection with professional society work. So I've had the opportunity to visit many nuclear organizations around the world. I've seen facilities in Taiwan, Japan, Korea, the People's Republic of China, Australia, Mexico, Brazil, and Western and Eastern Europe as well as the former Soviet Union, including Chernobyl. So I don't really feel a stranger among all of you or even at the Commission.

Let me talk a minute about the Commission. For those of you who don't know, the Commission has 5 Commissioners and is bipartisan politically, which means that no more than three of the five can be of the same political party. I've been told that one of the former chairmen, Admiral Lando Zech, said of the Commission, "The challenge is basically how to get things done with a five-headed body." One of the more interesting things about the Commission is that we operate under the Sunshine Act. This means that no more than two of us can meet together without it being declared a public meeting and without all of the proper announcements having been made prior to that meeting.

What do we do? Well, basically, we set policy. In this process we each rely very heavily on our immediate staff to identify the issues and function as our communicators with the staff of the other Commissioners as well as the rest of the NRC. So, let me introduce my staff to you. Nearly all of you know Joel Lubenau. On almost every issue that comes along, Joel asks "Have you considered the states' views on this? Do we know what the states think?" So you've got someone there to alert us on issues that are of interest to you. Eileen McKenna is my technical assistant who specializes in reactor issues and is my executive assistant as well. Kay Whitfield joined us from the Department of Energy and follows radioactive waste issues. Neil Jensen is my legal assistant. Every Commissioner has to have an attorney to keep us out of trouble. Finally I have three administrative assistants, Evelyn Williams, Connie Schum, and Jeannie Mulliken. If you should call my office, any one of them will be very pleased to help you.

The process of becoming a commissioner was very interesting in that both the White House and the Senate always stressed the

mission of the NRC. The fact that the main purpose of the Commission is to assure the safe use of nuclear energy and nuclear materials came through loud and clear throughout that process, which I found very encouraging.

If you examine NRC's resources, whether you look at the distribution of staff [**Figure 1**] or the distribution of funding [**Figure 2**], it is clear that the functions of the Commission are predominantly associated with the nuclear power industry. However, the remainder of the NRC efforts are directed at equally critical areas, and I would like to talk about just a few of those today.

First is the international area. While the United States has the largest nuclear power program in the world, it's important to note that we are responsible for only 30 percent of the world's nuclear power production [**Figure 3**]. That means to me that while we have much to contribute internationally, we also have much to learn. One of the areas in which we can learn from other countries is that of radiation protection at nuclear power plants. For example, occupational doses in U.S. plants are higher than those in plants of some other countries around the world. Further the Europeans are ahead of the United States in implementing the more current international recommendations in radiation protection. So we have something to learn from them. But we also have a lot to contribute. Chernobyl is a key example of that. The NRC is now active in contributing to improvements to the safety of the reactors in the former Soviet Union and is also involved in interagency efforts to look at the health effects of the accident at Chernobyl.

NRC's international activities are carried out primarily through bilateral agreements. We have bilateral agreements with 26 different countries as well as Taiwan. And we have 60 joint international research agreements.

Let me turn to another key effort in the NRC, and that is radioactive waste. The future for low level waste disposal is not at all clear; we need to stay tuned to what's going to happen at the Supreme Court. A decision is expected from the Court before the summer recess on the constitutionality of the take-title provision of the Low-Level Waste Policy Act. At the other end of the spectrum, a significant effort is currently being devoted by NRC to preparing for the licensing of a high-level waste facility, presumably at Yucca Mountain.

Materials licensees command a fair amount of the NRC's resources. As you well know, NRC and the Agreement States oversee about 23,000 materials licensees, two-thirds of which are handled by the Agreement States.

Let me turn for a moment to the medical uses of radiation and radioactive materials. I have become aware of the controversies and the increasing tension in this particular area between the NRC and the Agreement States, -- and let me take this opportunity to welcome Maine to the Community of Agreement States -- but also between NRC and the regulated medical community. The challenge for me, as for my fellow Commissioners, of course, is to acquire a full understanding of medical policy issues. There are several ways that I am trying to do this. The first, of course, is through the NRC technical staff, who provide briefings, reports and Commission papers, and, of course, through the review of correspondence on these issues. My immediate staff independently assesses the technical and policy issues and the contemplated agency actions. In addition to using the NRC resources, I also acquire information from various government, industry, and technical sources, for example, through site visits. I recently visited the National Institutes of Health in Bethesda, Maryland to gain some firsthand knowledge of the radiation protection issues facing a large medical research institution. I have also visited a radiopharmacy to gain a better understanding of their radiation protection program and to hear some of the regulatory issues facing this industry. Just a few weeks ago, I was at Columbus Cabrini Hospital in Chicago to tour their gamma knife facility and their remote brachytherapy afterloader.

Since becoming a Commissioner, I've also met with representatives of various organizations having interests in the regulation of nuclear medicine including the American College of Nuclear Medicine, American College of Radiology, Food and Drug Law Institute, NRC Advisory Committee on Medical Uses of Isotopes, Organization of Agreement States, as well as individual Agreement States, Society of Nuclear Medicine, U.S. Pharmacopeia Convention, and this Conference. These informal meetings included candid discussions, and I found them extremely enlightening. Collectively, these independent sources provide additional

insights and perspectives on medical licensing and compatibility policy issues.

Let me now share some observations on the role of the states versus the Nuclear Regulatory Commission.

The first observation is that the states have a broader role than the NRC has in the regulation of radiation and radioactivity in medicine. The States' regulatory responsibilities include X-rays, accelerators, naturally occurring and accelerator-produced radioactive materials (NARM); as well as agreement materials. According to the National Council on Radiation Protection and Measurements (NCRP), medical X-rays, by far, account for most of the public's dose from medical sources of radiation, i.e., 73 percent of the total medical annual per capita effective dose equivalent of 55 millirem [**see Figure 4**]. I was pleased to hear at this year's meeting of the NCRP of the excellent advances in reducing radiation doses in mammography. It was not too long ago that mammographic imaging doses were so large that it was recognized that the widespread use of mammography could, in fact, induce as many breast cancers as it would detect. There has also been progress in improving imaging quality as well. These improvements are attributable to a team effort by the states, the medical and other professional societies, the FDA, and, of course, the Conference.

A second observation is that the state programs must balance medical X-ray protection program needs with other competing radiation protection issues, for example: industrial sources of radiation, radon, emergency response, operator/user recognition, waste disposal and non-ionizing radiation. There are only so many resources available to the States. These resources have to

be allocated according to some kind of priority, typically, where the problems are the most severe. That is indeed a big challenge.

As an aside, I was very interested to see that a large part of the Conference's program is devoted to electromagnetic frequency (EMF) radiation. The problems that you deal with are incredibly broad, and I'm very impressed with the way in which you manage those programs. NRC, of course, does not have this broad-based responsibility.

A third observation is that the use of Atomic Energy Act materials in nuclear medicine appears to be decreasing relative to the use of other sources. For example, there is increasing use of positron emission tomography (PET) facilities, which primarily use accelerator-produced radioactive materials. There has been a decrease in the number of licensed teletherapy units in the United States. There are concerns in the medical community over the increased dependence upon foreign sources for radioactive materials which may ultimately lead to further increases in the use of accelerator-produced radioactive materials in nuclear medicine.

Let us turn, then, to some specific issues related to medical uses of radioactive materials that have emerged from the various discussions that I have had recently. I am still in the process of formulating my thoughts on these issues, and I welcome your input and further information. The first issue is safety. Someone has to be responsible for the safety of the patient, safety of the worker, and safety of the public. But there are controversies about who should be doing that, especially with respect to patient safety. Training is another area of controversy. What should be the minimum training requirements concerning radiation safety for physicians and pharmacists?

What should be the role of NRC's Advisory Committee on the Medical Uses of Isotopes (ACMUI)? It's interesting to me that that committee reports to the NRC staff, not to the Commissioners, as some of the other committees do. I've been briefed by Dr. Barry Siegel, the Chairman of ACMUI and I'm impressed with what the committee can do. Clearly, there are some questions about what the proper role of that committee can and should be.

What is the role of professional organizations? In speaking to many of you from professional organizations, I have gotten the impression that you may not be as active as the professional organizations in the nuclear power community are in directly talking to the Commissioners. That communications channel is clearly available to you and can be used for the benefit of both sides.

What should the role of the Agreement States be? The Atomic Energy Act is quite clear in stating the desirability of compatible Agreement States programs, but the Act does not define compatibility. The issue of what exactly constitutes compatibility is expected to be before the Commission soon. Regardless of the outcome, I believe that there has to be an open dialogue and a truly meaningful exchange between the NRC and the Agreement States. There must be genuine participation by the Agreement States in the process of developing regulatory programs covered by the Atomic Energy Act. When we're in the mode of considering what should be so-called Category I, II, and III items of compatibility, perhaps we should broaden our perspective a bit and consider the impacts of compatibility options upon the states' overall radiation protection programs, as I indicated earlier. However, that does not mean that the NRC can ignore an agreement state program that is not carrying out its responsibilities under its agreement to protect public health and safety.

In 1983, the National Governors Association said of the NRC Agreement States program, "The agreement states program is one of the most successful state-federal partnerships yet established." Furthermore, six years later the NRC task force reviewing the funding of training programs for the states found that the Agreement States program saves NRC 214 technical full-time equivalents and \$18 million annually.

Where do we go from here? Is the Agreement States program still on track? Arguably, there are signs of difficulty. There are differing views regarding medical licensing of radioactive materials. There are state budgetary constraints and, last, but not least, there are the compatibility issues. However, we should all remember the title of Section 274 of the Atomic Energy Act, "Cooperation with the States." The question for the 1990s is: Can the Agreement States program continue to be a model for successful federal-state cooperation? Recognizing that there are problems facing us, this program is nevertheless a good program. It benefits the NRC. It benefits the state. And it benefits the public.

I would like to try to help resolve some of the areas of conflict. I intend to see that this program not simply continues, but serves as a model to be followed, as the National Governors Association said, as "one of the most successful state-federal partnerships yet established." I would welcome hearing from you and establishing a dialogue to this end, and I invite all of you to contact my staff and to come and see us. Let us share our thoughts on issues of mutual interest.

I thank you very much for having me here today. It's really been a pleasure to be with all of you and I wish you all continued success in your professional endeavors.

