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Eight Heads Are Better Than One:
Sharing Regulatory Perspectives Through the
International Nuclear Regulators Association

by

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Address to the World Association of Nuclear Operators
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Good afternoon, ladies and gentlemen. It is my pleasure to address the World Association of Nuclear Operators (WANO) in my dual capacity as the Chairman of the U.S. Nuclear Regulatory Commission (NRC) and as the first Chairman of the International Nuclear Regulators Association (INRA). As requested, my topic today is the INRA: its brief history, its goals, structure, activities, and cooperative linkages with other international bodies. Since its inception in May 1997, I have spoken about the INRA in various fora, including the IAEA-sponsored Senior Regulators Meeting in October 1997; the December 1997 meetings of the OECD/NEA Committee on Nuclear Regulatory Activities (CNRA) and the Committee on the Safety of Nuclear Installations (CSNI); and the October 1998 meeting of the OECD/NEA Steering Committee. Since some of you may have been present at these meetings, I will consolidate my discussion of the background and goals of the INRA, focusing more heavily on what has been accomplished thus far, our current status, and our plans for the future.

Background

Soon after President Clinton appointed me as the NRC Chairman, as I began to meet with senior nuclear regulators from around the world, I was impressed by the commonality of the challenges that faced national nuclear regulatory bodies. My discussions with my counterparts, the senior officials of these organizations, turned increasingly toward the need for a permanent forum under the direction and control of national nuclear safety regulators, focused on sharing regulatory policy perspectives at a high level.

Without question, nuclear safety must remain the responsibility of the nation states in which the technology is utilized. However, safe nuclear electric generation and effective regulation of nuclear energy and reactor byproduct materials are topics that transcend national boundaries. In the wake of the Three Mile Island and Chernobyl accidents, increased attention focused on ensuring the highest levels of safety and security in civilian nuclear programs worldwide through cooperation and assistance activities. Nuclear operators long have recognized the value and the imperative of combining their national efforts in the cause of enhanced safety. Since the

1980s, organizations such as the Institute for Nuclear Power Operations (INPO) and WANO have provided nuclear operators with an organized focus for improvements, resulting in a safer and more economical nuclear industry.

These private sector activities have been paralleled in the inter-governmental arena. Several multilateral assistance initiatives--including those addressing the safety of Soviet-designed reactors in Central and Eastern Europe, and the establishment of the Group of 24 Nuclear Safety Coordination mechanism--have been most effective when the efforts have been harmonized among donors. The Group of 7 (G-7) industrialized nations recognized the importance of nuclear safety issues, and created the Nuclear Safety Working Group (G-7 NSWG) to coordinate their assistance and cooperation activities. Under their broader charters, the OECD/NEA and the International Atomic Energy Agency (IAEA) also have established technical programs of work addressing nuclear safety. Each of these organizations continues to demonstrate the value of sharing policy and technical perspectives in the pursuit of enhancing nuclear safety worldwide. The Convention on Nuclear Safety (CNS) is the capstone of these governmental efforts, codifying widely held views regarding how best to achieve safe national nuclear programs. In each of these public and private initiatives, the central safety role of a technically competent, independent regulatory authority with adequate resources has been affirmed.

The existence of multiple, and occasionally overlapping, nuclear safety activities has prompted the formation of a growing number of multilateral and regional regulator meetings and groups. include the annual meetings of the OECD/NEA Committee on Nuclear Regulatory Activities (CNRA), the Committee on the Safety of Nuclear Installations (CSNI), and the ad hoc Heads of Regulatory Agency Meetings; the IAEA Senior Regulators Meetings; the VVER Owners' Regulatory Group; the CANDU Owners Group; the Forum of Iberian-American Regulators (FORI); the Network for Regulators with Small Nuclear Programs (NERS); and ad hoc meetings of European Union regulators. These meetings provide a valuable supplement to the mix of worldwide nuclear safety enhancing efforts. However, as a rule, these meetings: (1) have taken place under the aegis of organizations with diverse mandates, (2) have been technically oriented, and (3) have not, in general, involved policy discussions among the heads of national regulatory agencies.

Senior nuclear regulators themselves have maintained informal bilateral contacts and, on an ad hoc basis, have arranged meetings to discuss issues of mutual interest, primarily within the context of meetings at the OECD/NEA and the IAEA. Prior to 1997, however, no permanent forum existed that was devoted solely to the mutual interests of senior regulators or to harmonizing their regulatory priorities.

INRA Initiative

In the Fall of 1996, a group of senior regulators, meeting near Paris, reached consensus on convening a working group to discuss formulating a free-standing, independent organization specifically derived from and focused on the needs of the most senior officials of national nuclear regulatory bodies. The working group first convened in Washington, D.C. in January 1997, and subsequently, in a Paris meeting in May 1997, eight regulatory agency heads agreed on a Terms of Reference document that officially constituted the International Nuclear Regulators Association. The Terms of Reference were signed by the heads of national nuclear regulatory agencies from eight countries--Canada, France, Germany, Japan, Spain, Sweden, the United Kingdom, and the United States.

The Association determined its objectives to be as follows:

To establish a forum for the most senior nuclear regulatory officials to exchange views on broad regulatory policy issues (including technical, legal, economic, and administrative issues);

To build a global nuclear safety culture;

To encourage the most efficient use of resources in areas of common interest;

To work to enhance the stature of nuclear regulatory organizations worldwide;

To seek consensus on how nuclear regulatory issues can be approached and implemented;

To facilitate international cooperation in regulation;

To work to advance nuclear safety through cooperation among its members, with relevant existing intergovernmental organizations (such as the OECD/NEA and the IAEA), with other national nuclear regulatory organizations, and with other groups and organizations, as appropriate; and

To identify emerging nuclear regulatory challenges.

The Association meets twice a year, hosted by the INRA Chairman. The participating heads of national regulatory organizations cover their own expenses of participation. The Association issues group reports and recommendations as appropriate.

Within the organizations represented, the INRA membership is held by the most senior national nuclear regulatory officials. The organizational membership is based on a series of criteria related to the maturity, size and scope of the national nuclear program; the existence of a well-established, independent nuclear regulatory authority; and a commitment to the provisions of the Convention on Nuclear Safety. We have chosen to keep the initial membership of eight countries stable for the first two years, while the members deliberate on the most effective methods of achieving their goals and objectives. In the near future, INRA members will reconsider the possible expansion of membership.

Key Accomplishments

What has the INRA accomplished thus far? Beginning with the constituting meeting in Paris in May 1997, the Association has discussed issues significant to both national and international nuclear safety regulation. We provided input on topics of nuclear safety concern to the May 1998 Moscow Energy Ministerial and the June 1998 Heads of State summit of the G-7 and Russia. To ensure regular communication and possible future cooperation, we also have formalized channels of communication with both the IAEA and with OECD/NEA.

Over the course of the first two INRA meetings, each member country made a presentation on the effect on nuclear safety of trends in national electric generation. One element of particular interest was the fact that competition in the electric power industry was placing an increased emphasis on reducing costs, including some that may have a bearing on nuclear safety. As a

result, the group identified several areas in which regulatory organizations might wish to give increased attention, including licensee self-assessment, with an emphasis on how to maintain and enhance technical, personnel, and financial resource capabilities necessary to ensure safety in a changing industrial environment.

As a corollary activity, the Association has begun to identify a set of fundamental elements in nuclear safety regulation that are common to the various regulatory systems of nuclear countries. These elements, which help to define the essential characteristics of a sound national nuclear regulatory infrastructure, would be made publicly available, as appropriate, to assist all countries in enhancing and evaluating their regulatory regimes. We felt it would be useful to review the different regulatory approaches of its members, focusing on how regulatory processes impact nuclear safety. Although differences exist in the history, development, current structure, and scope of responsibilities of various national nuclear regulatory bodies, as well as in the degree to which nuclear energy plays a role in any given national energy strategy, we were interested in the fundamental similarities among these disparate programs.

Building on these discussions, an Association Statement on "Ensuring Nuclear Safety in an Increasingly Competitive Electricity Sector" was provided by INRA members to their national representatives to the March 1998 Energy Ministerial in Moscow. The INRA contribution was reflected in the Energy Ministerial final communique. Shortly thereafter, the Association drafted a separate statement on nuclear safety for national Foreign Ministers in preparation for the May 1998 G-7/G-8 Economic Summit in Birmingham, attaching the list of key elements of nuclear safety. We were pleased to note that the Summit final communique reaffirmed the G-7/G-8 commitment to nuclear safety.

This exercise has solidified for INRA members the unique value, in this forum, of sharing insights on how best to fulfill basic safety objectives, how to meet technical and policy challenges, how to ensure effectiveness as regulators, and how to position these regulatory organizations for change in national and global economics. This requires a common vocabulary. To develop such, as an initial step, we have begun to discuss and define five key regulatory concepts. At our most recent meeting, in January 1999, we focused on the first two key concepts: (1) Effective Independence; and (2) Regulatory Process.

- ◆ Effective Independence: In the first area, INRA members have reaffirmed the need for an effective separation between the functions of the regulatory body and those bodies concerned with the promotion or use of nuclear energy. Effective independence includes political, legal/statutory, financial, technical, communication, and ethical accountability components. These elements will help to preserve a decision-making framework characterized by neutrality and objectivity.
- ◆ Regulatory Process: One key to providing effective regulatory oversight of nuclear safety is the establishment of clear regulatory processes consistent with written regulations. A robust national regulatory system should include a sound organizational structure (with planning and resource management mechanisms); an effective licensing process; an ongoing inspection program; fair but firm enforcement of its regulations; clear emergency preparedness rules and guidelines; effective incident response mechanisms; and an adequately staffed and financed program for independent nuclear safety research.

At the upcoming meeting in May 1999, we will focus on the remaining three key concepts: (1) Powers and Sanctions of Regulatory Bodies, (2) Internal Quality Assurance, and (3) Regulatory Effectiveness.

A third overall area of INRA effort was a discussion topic at our July 1998 meeting, where we drafted an Association Statement on regulatory aspects of the OECD-commissioned Birkhofer Report. The Statement was transmitted to OECD Secretary-General Donald Johnston in September 1998. In brief, INRA members believe the Birkhofer Report made a valuable contribution by assisting NEA Member nations in forging a future role and course of action for the NEA. The Association strongly supports an NEA focus on the scientific and technological aspects of nuclear energy issues, and believes that it should remain a government-to-government forum where nuclear energy can be discussed in an objective manner. INRA members asked the NEA Steering Committee to consider the points of the Association Statement in developing an OECD/NEA Strategic Plan and, as appropriate, an OECD/NEA Mission Statement.

A fourth area that INRA members have addressed is the effectiveness of nuclear regulatory and safety assistance. Presentations by several of the INRA members have illuminated the difficulties and challenges of multilateral nuclear safety assistance efforts in various areas of the world, particularly in light of: (1) short-term programs with limited resources that attempt to address long-term needs of the recipient states; (2) the disparate roles of the recipient government, operator, and regulatory organizations in making concrete changes to nuclear safety culture; and (3) the often conflicting assistance offered by different donor countries. These challenges take on added dimensions during the transition from assistance to cooperation, as donor and recipient states redefine their needs and roles, and a comprehensive understanding of infrastructure, design, operation and safety oversight is gained. To enhance these discussions, we have invited regulatory representatives from other national nuclear regulatory bodies to make presentations at future INRA meetings on their nuclear programs, and to share their perspectives on international nuclear safety assistance efforts.

Finally, a very timely area of INRA focus has been the challenge posed by the Year 2000 (Y2K) computer bug. At the January meeting, Spain and the United States made formal presentations on their national Y2K programs, including contingency planning and potential opportunities for cooperation. The group then developed an Association Statement on Y2K, which essentially underscores the need for aggressive and prompt government action to diagnose Y2K problems, to formulate and implement effective remediation programs, and, especially to prepare contingency plans. This Statement has been forwarded by members to their governments, to the NEA and the IAEA, and to the Chairman of the first Review Meeting of the Convention on Nuclear Safety for Contracting Parties to use in its April 1999 deliberations.

Relationships With Multilateral Organizations

One issue of importance to the Association has been the development of relationships with other international nuclear bodies. While members decided that for the first two years they would not expand the INRA membership, they agreed that relevant international bodies would be informed on a regular basis of the activities of the Association. If INRA members are to understand better their own domestic issues, they must work within the larger sphere of international energy demands and regulatory activities. This requires sharing knowledge to

broaden international perspectives on nuclear issues, and to enhance a global nuclear safety culture at every opportunity.

As I stated earlier, we have formalized channels of communication with both the IAEA and with OECD/NEA. Related activities include making presentations such as this one today; establishing formal and informal contact with our counterpart organizations; developing protocols for cooperation; broadening the regular distribution list of INRA information; and inviting heads of non-member national nuclear regulatory organizations and key countries to select INRA meetings. This approach is intended to give the broadest possible effect to INRA discussions, recommendations and resolutions, and also to prevent duplication of effort. In short, the INRA has focused on working with, not displacing, other organizations.

Conclusion

To summarize, the establishment of the INRA grew out of the need for senior regulators at the highest levels to have an independent forum to discuss issues of mutual concern, and to make policy recommendations to strengthen nuclear safety regulation. As a result of these efforts, Association members hope to enhance the goal of global nuclear safety.

I also would like to note that, in an era of organizational change and in the face of increasing financial constraints, INRA and other like-minded cooperative efforts are especially important. Speaking as the Chairman of the U.S. Nuclear Regulatory Commission, I personally can verify that the ability to use risk assessment methodologies in nuclear safety regulation and in nuclear operations, the need to update regulatory approaches in response to rapidly changing electric generation markets, and the general need to be as efficient and as effective as possible are causing a re-examination of how best to restructure regulatory safety programs. From my discussions with a broad range of colleagues and NRC stakeholders, I know that these challenges are a shared phenomenon. It is my sincere hope that, in responding to national and international changes, we find the opportunity to better harmonize our regulatory programs. Successfully responding to the transnational nature of both the nuclear industry and of public confidence in this technology will depend in great measure on reliable, transparent regulation, which in turn is served best through cooperative efforts such as that of INRA.

I hope that this presentation has helped you to understand the INRA history, activities, current status, and goals for the future. Thank you for the invitation to speak at this session.