

## **President's Closing Comments**

### **Nuclear Safety Topical Issues Conference**

*18 – 22 October 2004-10-21*

Beijing, China

It gives me great pleasure to have served this week as the Chairman for this conference on Nuclear Topical Issues. We have now come to that part of this conference where each Chair has to earn his or her pay. Up to now, it has been you, the individual presenters and the participants in this conference who have made it a success. You, the presenters, have provided the thought and insights for each of our individual topics. You, the participants, have raised the questions and engaged in the discussions that have taken this conference beyond the individual papers. For this, I give each and everyone my heartiest congratulations and thanks.

But, as I mentioned, now it is my turn. As the Chair for this conference, I now will attempt to summarize the major findings and recommendations that we, together, have reached during the past 4-½ days. In putting my thoughts together, I have chosen not go through a detailed summary of each individual session. I leave the task of preparing the details of each session to the IAEA staff rapporteurs and the respective session chairpersons. These findings will, I am sure, be adequately captured in the final report of this meeting. ( Of course, you know that this will mean that each of us will now have to buy a copy of the proceedings!!!)

What I am going to do is to present what I believe are the central themes that have arisen during the week's presentations and discussions. I will also share examples from the individual topical sessions that, I believe, support my thematic categories. In preparing these thoughts, you will find that my themes are closely aligned to the topical sessions. One key exception is that I believe that the regulatory implications are something that is woven throughout this concept of a changing environment. I believe that it is an inherent part of each of my thematic areas; therefore, you will not see it as a separate thought.

My first broad theme is the need to harmonize regulatory approaches:

- There is a need to build on the IAEA Safety Standards to provide vendors, operators and regulatory authorities with internationally accepted standards for designing, licensing, operating and regulating nuclear installations;
- The variant opinions on design certification
- The question of how to harmonize the transition point between safety standards and industrial standards;
- Role of the IRRT to act as a vehicle to promote regulatory consistency. Emphasis on the new IRRT process that addresses self-assessment. Recognition of the generic call for all Member States with nuclear installations to consider availing themselves of this valuable peer review service.
- The need to establish the right balance in using, in a complementary manner, both deterministic and probabilistic approaches during design, operations and regulatory activities;
- Globalization and the provision of reactors to Member States with no vendor knowledge (or allowing for the new business concepts where new corporate owners or individual site managers are “business oriented and experienced” as opposed to being “operationally experienced”) calls into questions who “owns” the design (design conscience), who is responsible for providing the necessary focus (decision-making and resources) on safety (safety conscience) and security (security conscience).

My second broad theme relates to the concept of Operational Experience and the need to foster an environment conducive to becoming “learning organizations:”

- Maintaining a transparent environment is essential, both with other owner-operators, with the regulatory authorities and with the public;
- Recurrent events are taking place! How to we ensure that the lessons learned in the past are not forgotten during the present and lost in the future?;
- The process for identifying “low level” and “near miss” events must be stimulated and serve as repositories of lessons learned for all members of the nuclear community;
- Artificial barriers to sharing safety related information need to be breached. This includes addressing proprietary, technical and political factors that stand in the way of information sharing;

- Information technology methods, such as self sustaining networks, must be pursued to ensure that resources are leveraged to the maximum degree possible;
- Lessons learned are not unique to any specific period in the life cycle of a nuclear installation or any particular type of nuclear installation. Knowledge must be shared during design, construction operational and decommissioning phases of all facilities (power plants, research reactor and fuel cycle facilities);
- Likewise, lessons learned are not unique to any particular industry. All sources of lessons relative to material and process safety insights must be pursued.

My final theme relates to the concept of extended operations:

- The first point that comes to mind is the extended discussions we had concerning the term “long term operations.” Not sure if we ever reached an agreed upon definition, but for this morning I propose “continued operations of nuclear installations that have been in operation for periods beyond their design assumptions;”
- What safety standards are needed, if any, for the transition from “normal operations” to “long term operations;”
- Some countries view long term operations as a continuous process and others as something that is tied to their licensing process;
- It was accepted the for safe long term operations of an installation, the safety analysis must show that the plant will continue to operate within its design envelope. Thus, there is a need for:
  - Sound knowledge of the current design basis;
  - Accurate knowledge of the actual state of the plant;
  - Verification that adequate safety margins will be maintained;
- Long term operations must consider the concept of ageing management in its broadest context, addressing both material (pumps, valves, etc.) and personnel (knowledge) issues.

Finally, in closing I would like to make a couple of personal observations. If you looked at the participants list for this conference, you will notice that the attendance was dominated by regulators, and the participating countries were mostly those with nuclear power plants. There were reasons for this, such as the fact that just last year there was an international conference that was specifically focused on research reactor safety; however, I would encourage the Secretariat to actively pursue the widest possible participation in future conferences. The Operating Safety conference that is scheduled for December of next year in Vienna should cast its net wide and far. All stakeholders interested in nuclear installation operational safety should be actively pursued.

Second, as the current chairman of the International Nuclear Safety Group (INSAG) I must say that I am quite proud that the four areas that we have identified related closely with the findings of this conference. The need for a Global Safety Regime, what should be the Safety Principles upon which nuclear installations are grounded; what are the Operational Safety considerations that are driving nuclear safety; and, how should information be shared throughout the entire nuclear community (public outreach). The shared focus seems, to me, to add credence to each others deliberations and conclusions.

Again, I thank you for your active and thoughtful participation. You have made my job this week a pleasure. And, I most especially thank our Chinese hosts, the China Atomic Energy Authority (CAEA) and the National Nuclear Safety Administration (NNSA) for their hospitality and professionalism. Your attention to detail and your warmth and friendliness have made this week one that, I am sure, all of us will long remember.