EFFECTIVE REGULATION - A KEY ELEMENT IN A NUCLEAR PROGRAMME

J. WADDINGTON, Canadian Nuclear Safety Council, Canada

A key prerequisite to the development of a nuclear program to provide a country's electricity is that governments and the public are confident that a nuclear accident “will not occur” over the whole life of the program. This can only be achieved by three elements being equally strong: an excellent design, a highly competent and safety conscious operator, and a strong competent regulator with appropriate legal powers.

This paper will outline what is necessary to achieve the third of these prerequisites. It will outline the principles by which a Regulatory Agency ensures that licensees meet their responsibility for the safety of their nuclear plant, based on both internationally accepted ideas, the Nuclear Safety Convention, and Canadian practice. The paper will cover legislative principles -- what to include in legislation, what to include in regulations, and what to include in standards and guides. The problem of “prescriptive requirements” versus “general performance statements” in regulations will be addressed, and the implications of this problem on ensuring licensees retain responsibility for safety, and on licensees’ desire for a high degree of certainty in what is expected of them, both to get a licence and to keep it, in today’s economic climate.

The paper will also address compliance and the differences between the lawyers’ definition of compliance (meeting specific requirements defined by law) and the nuclear safety engineers’ view of compliance, (meeting commitments made at the time a licence was given), and how these views can be reconciled.

The paper will discuss how Canada’s new Nuclear Safety and Control Act has addressed some of these issues, and how the Canadian Nuclear Safety Commission is implementing the new Act.

The issue of transfer of regulatory programs and technology to the regulatory agencies of countries buying a nuclear plant from Canadian companies will be discussed, and examples given of how this has been accomplished to the benefit of the regulatory agencies and the benefit of safety of nuclear power plants in both the receiving country and in Canada.