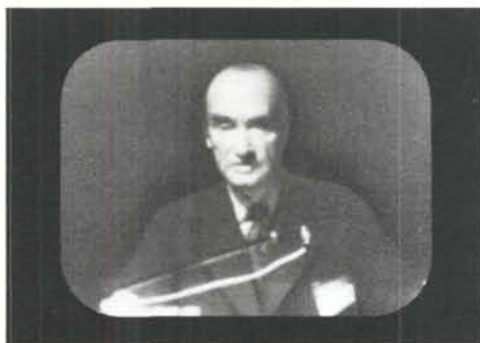


31. L. Pease et al., "Safety of Heavy-Water Reactors". IAEA-CN-36/181.
32. S.L. Kati et al., "Reactivity Requirements and Safety Systems for Heavy-Water Reactors". IAEA-CN-36/393.
33. S. Hanauer, "US Nuclear Safety Review and Experience". IAEA-CN-36/539.
34. V.A. Sidorenko et al., "Main Ways for Solution of Nuclear Power Plant Safety in the USSR". IAEA-CN-36/343.
35. R. Gausden et al., "Criteria for Guidance in the Safety Assessment of Nuclear Installations in the UK". IAEA-CN-36/58.
36. E. Iansiti et al., "IAEA Activities to prepare Safety Codes and Guides for Thermal Nuclear Power Reactor Plants". IAEA-CN-36/527.



INTERNATIONAL CONFERENCE ON NUCLEAR POWER AND
ITS FUEL CYCLE (2–13 May 1977)



Safeguards

Bertrand Goldschmidt
of the Commissariat à l'Energie Atomique (France)
presented a historical review
of the control of atomic energy and the problem
of non-proliferation.

Nuclear non-proliferation was one of the major topics discussed during the conference. Particular emphasis was placed on IAEA safeguards and the recognition of problems of international safeguards in connection with developments in the nuclear fuel cycle and the continually increasing number and types of nuclear facilities and material under IAEA safeguards.

The expansion of nuclear trade and the accumulation of strategic nuclear material, which may be used for the manufacture of nuclear explosive devices, and other factors create new problems with regard to the non-proliferation of nuclear weapons and impose new tasks on international safeguards.

During the course of the conference, ideas were generated concerning the strengthening of safeguards and increasing their effectiveness. It was indicated that the supplier countries had arrived at the common recognition that IAEA safeguards need to be supplemented by additional arrangements. For example, the following concepts for strengthening the non-proliferation regime were suggested: a "trigger list" of material and equipment, which was agreed upon by major suppliers; IAEA-controlled plutonium storage; standardization of safeguards covering all peaceful nuclear activities of non-NPT countries; multinational nuclear fuel centres which would combine reprocessing plants and plutonium fuel fabrication plants to minimize the diversion or hijack opportunities.

The conference also stressed the importance of developments and improvements in nuclear material accountancy; containment/surveillance measures; safeguards criteria; adequate functioning of the State's system of accountancy and control; physical protection measures; and international safeguards co-operation.

The main emphasis was placed on the fact that the responsibility for international safeguards will rest with the International Atomic Energy Agency, which carries out its control activities, *inter alia*, through independent verification. These responsibilities cannot be transferred to any other authorities.

A comprehensive report on the safeguarding of nuclear materials will be published in a forthcoming issue of the IAEA *Bulletin*.

Selected papers:

1. B. Goldschmidt, "The Control of Atomic Energy and the Problem of Non-Proliferation". IAEA-CN-36/591.
2. I.D. Morokhov et al., "International Safeguards for Non-Proliferation of Nuclear Weapons". IAEA-CN-36/340.
3. R.T. Kennedy and H.E. Lyon, "Assurance of the Effectiveness of Safeguards in the Light of their Objectives". IAEA-CN-36/414.
4. R. Imai, "The Role of IAEA Safeguards in Connection with Nuclear Trade". IAEA-CN-36/157.
5. H.W. Schleicher and B.W. Sharpe, "The EURATOM Safeguards System as a Regional Control System". IAEA-CN-36/434.
6. R. Rometsch and G. Hough, "The Position of IAEA Safeguards Relative to Nuclear Material Control Accountability by States". IAEA-CN-36/534.
7. C.A. Bennett, "Current Technical Issues in International Safeguards". IAEA-CN-36/40.
8. H. Kurihara et al., "The Present Status and Development of Japan's System of Safeguards". IAEA-CN-36/173.
9. O.A. Miller et al., "Some Technical Aspects of the Nuclear Material Accounting and Control at Nuclear Fuel Cycle Facilities". IAEA-CN-36/528.
10. D. Gupta and J. Heil, "International Safeguards in Large-Scale Nuclear Facilities". IAEA-CN-36/84.
11. G.R. Keepin, "Non-Destructive Assay Technology and Automated 'Real-Time' Materials Control". IAEA-CN-36/42.