

APPENDIX IX-B

INTRODUCTION

by

Stieff Research and Development Co., Inc.

INTRODUCTION

Since the closing days of World War II the proliferation of nuclear weapons has been widely recognized as perhaps the most serious threat to the survival of mankind and the effort to limit this proliferation as a task which would test the wisdom, ingenuity, and statesmanship of the world's leaders. As governments and men have grappled with this problem, their concerns have enlarged to include not only what is now called "vertical proliferation" - i.e. , the continued testing, manufacture, and growth of evermore sophisticated arsenals of nuclear weapons by the five principal nuclear weapon states (NWS), but also the seriously destabilizing potential of "horizontal proliferation" by the non-nuclear weapon states (NNWS), and, much more recently, the growing nuclear threat posed by terrorist or other non-state adversaries not operating under the authority of any established national government. Although this report is concerned primarily with the international framework that has or may be constructed to deal with the problem of limiting "horizontal proliferation" and, to a much lesser extent, with the international response to the non-state adversary threat, the importance cannot be overemphasized of the impact of "vertical proliferation" on our non-proliferation efforts. Failure of the NWS's to reduce the immense present danger embodied in the continuing growth of their nuclear weapons arsenals will as surely impede our non-proliferation objectives as would the failure of the world community to promptly challenge the test of any nuclear device or the diversion of safeguarded nuclear materials by a non-nuclear weapon state. The bitter reaction of the NNWS during the 1975 non-Proliferation Treaty (NPT) Review Conference and the threat of Yugoslavia to withdraw from this Treaty because, in its view the United States and the Soviet Union in particular, had not fulfilled their solemn obligations under Article 6 of the NPT, are clear evidence that the non-nuclear weapon states do not take lightly their understanding of the balance of obligations undertaken by all parties to the NPT.

Introduction

The threat of "horizontal proliferation" has, of course, been recognized since the beginning of the Nuclear Era and was the object of the joint Declaration of November 15, 1945 by the President of the United States and the Prime Ministers of Canada and the United Kingdom. In this policy statement, the word, "safeguards" was used for the first time to describe international measures intended to prevent the use of nuclear materials and equipment from furthering any military purpose. The Declaration further proposed that the United Nations should set up a commission to make a number of specific proposals including "safeguards" to reassure states complying with a ban on nuclear weapons that violations or evasions of the ban had not occurred. The word "safeguards" is generally understood to be "a collective term that comprises those measures designed to guard against the diversion of material such as source and special nuclear material from uses permitted by law or treaty and to give timely indication of possible diversion or credible assurance that no diversion has occurred." (9) For the IAEA, the use of material accountancy is considered to be the safeguard measure of fundamental importance, with containment and surveillance as important complimentary measures. (10) In the United States, the word "safeguards" has been broadened to include physical protection measures and penal provisions to deter theft and diversion.

Early U. S. nuclear policy was directed at the elimination of "vertical proliferation" and the prevention of "horizontal proliferation". Unfortunately, efforts to establish the United Nations Atomic Energy Commission (UNAEC) and an International Atomic Development Authority (IADA) as proposed by Bernard M. Baruch, the United States Representative, were ultimately unsuccessful. The United States then turned to a policy of strict secrecy as the best means of limiting the spread of nuclear weapons. By the end of 1953, however, the United Kingdom and the Soviet Union had joined the

Introduction

group of nuclear weapon states and many countries were establishing nuclear research programs. These developments led to a major shift in U. S. policy and in December of 1953 President Eisenhower proposed his "Atoms for Peace" program in an address before the United Nations General Assembly. Through this approach it was hoped that the United States, by assisting foreign nuclear programs might not only influence the nuclear policies of other nations but also guarantee that, by the application of safeguards, the transfer of nuclear material and technology would be used only for peaceful purposes. With this address and with the enactment of the Atomic Energy Act of 1954 (42 USC 2011) establishing the basis of U. S. participation in international nuclear cooperative programs the necessity to address both aspects of nuclear proliferation became urgent matters of national policy.

The task of resolving "the Dilemma of the Fissionable Atom" - the unavoidable production in the peaceful application of the fission process of new fissionable material which could be diverted for weapons use - had not been ignored in the earlier efforts to establish the UNAEC and the IADA. The United Nations General Assembly Resolution laid down two principles:

1. "the fruits of scientific research should be made available to all nations and that the freedom of investigation and the free interchange of ideas are essential to the progress of knowledge."
2. "effective safeguards by way of inspections and other means to protect complying states against the hazard of violation and evasions," are essential.

Introduction

In its first report to the United Nations made almost thirty years ago the UNAEC included the findings on safeguards of its Scientific and Technical Committee. This report considered in more detail the problems of safeguarding declared nuclear activities, the detection of clandestine or undeclared nuclear activities, the seizure of nuclear materials, and the broad rights and privileges which an international control agency would require in order to implement effective safeguards. These principal policy areas still occupy those government officials and technical experts concerned with the problem of limiting the spread of nuclear weapons. With regard to safeguards, the UNAEC concluded that safeguards were scientifically, technologically, and practically feasible to the extent necessary to insure that atomic energy is used only for peaceful purposes. In addition, it was the Commission's belief that effective control of peaceful uses of atomic energy was dependent on the effective control of the production and use of uranium, thorium and their fissionable derivatives. On the specific need for international safeguards the UNAEC concluded that:

"Only by such an international system of control and inspection can the development and use of atomic energy be free from nationalistic rivalries with the consequent risk to the safety of all people. Only by such a system can the benefits of widespread exchange of scientific knowledge and of the peaceful uses of atomic energy be assured. Only such a system of control and inspection would merit and enjoy the confidence of the people of all nations."

The issue of "horizontal proliferation" inherent in the decision to greatly expand the peaceful uses of atomic energy was squarely joined. The right of each nation to fully benefit from this potential source of almost limitless energy should be assured, but, at the same time, the essential conditions had to be established that each nation should forswear the military uses of atomic energy, and that each nation must relinquish

Introduction

at least those minimum sovereign rights necessary to assure its neighbors and the world that its non-proliferation pledge had not been violated.

On many occasions in the past twenty years, the concern felt for non-proliferation has yielded to potentially more dangerous problems requiring immediate attention. With the detonation of the Indian nuclear device in May of 1974, however, and with the rapid growth of nuclear power in many countries, the issue of non-proliferation has re-immersed as a prime topic of international policy. This fact is attested not only in the Legislative and Executive Branches of the United States Government, but also in the legislatures and foreign offices of many of the other capitals of the world. These events, the rising threat of nuclear terrorism and sabotage, major unanswered questions of an environmental nature, and challenges to the safety of nuclear facilities have all called into question the viability and feasibility of continued nuclear power development. Questions are now being raised in many quarters concerning the effectiveness of the international institutions that were put into place in the late 50's and the 60's to deal with the problem of "horizontal proliferation." Many alternative approaches are now being considered to these questions ranging from moratoriums on nuclear exports and the construction of nuclear power stations to multinational fuel centers. The complexity of the social, economic, political, military, and technological issues which surround the proliferation problem absolutely guarantees that a simple solution to this matter will not be found.

A broadly based non-proliferation policy must contain many elements and should start with the recognition that for some countries there does not seem to be a reasonable alternative to nuclear power. This means that whether or not the United States withdraws from the nuclear export market or whether the United States chooses alternate sources of power, our national security will be directly affected by the

Introduction

decisions and actions taken by other countries in the nuclear area. The United States already has contractual commitments with many countries to provide nuclear fuel and these countries must be assured that their economies will not be disrupted by the withdrawal of U. S. enriched uranium. Our allies, in particular, and all non-nuclear weapon states, must be assured of strong alliances which will protect them from military or nuclear threat, The nuclear weapon states must acknowledge the necessity for real progress in the negotiations to limit the testing and growth of nuclear weapons. Sustained efforts should be made to increase the number of countries which are parties to the non-Proliferation Treaty and positive incentives should be offered to those countries which are party to the Treaty. There should be a clear understanding that abrogation of the Treaty or attempts at the diversion of nuclear material will be met with immediate world disapproval and strong sanctions. The intelligence agencies, particularly those of the nuclear weapon states, should significantly increase their efforts to insure that if clandestine nuclear facilities are constructed, they will be detected. Cooperation in the intelligence field even between our closest allies presents difficult problems but this subject should be carefully examined, and, if possible, formal procedures established to ensure the timely exchange of essential information. A strong effort should be made to persuade all countries that the limiting of the spread of nuclear weapons is in their best interests, for any country may be held hostage by a diversion or theft which occurred on the opposite side of the world. The international institutions which have been established to monitor compliance with the non-proliferation obligations of the non-nuclear weapon states should be strengthened and the member states of these organizations should insist on effective and credible, not minimal safeguards. Finally, our determination to contain the spread of nuclear weapons must not weaken even if another non-nuclear weapon state should successfully test a nuclear device. Nor, should the inability of our international institutions and initiatives to meet unrealistic expectations lead us to abandon them as failures, but rather, we must set reasonable goals and then make certain that they are met.