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The International Atomic Energy Agency: An Expanding Role in the Post-Chernobyl World

On October 26, 1956, the Statute of the International Atomic Energy Agency¹ was opened for signature for a period of ninety days by "all States Members of the United Nations."² During the period, eighty states, including the United States and the Union of Soviet Socialist Republics, signed the Agreement which established the International Atomic Energy Agency (IAEA).³ Among other functions, the Agency was empowered to "take positive steps to encourage the exchange among its members of information relating to the nature and peaceful uses of atomic energy" and to "serve as an intermediary among its members for this purpose."⁴ On April 26, 1986, exactly six months short of the thirtieth anniversary of the Agency's founding, explosions caused a fire in the fourth unit of the Chernobyl nuclear power station, 130 kilometers north of Kiev in the Ukraine, U.S.S.R.⁵ For three days, the Soviet government remained silent while radioactive clouds began to spread over neighboring countries, and only slowly over the following weeks and months did details of the near calamity emerge. Although the Soviet government has since provided extensive data on the causes and effects of the Chernobyl accident, it remains clear that the IAEA, for at least that critical three day period, failed in one of its most important functions.

This Article will attempt, through an examination of the current legal status and structure of the IAEA, to account for the Agency's seeming impotence in that critical situation. It will also outline the several important services which the Agency currently provides and, finally, will suggest an expanded role for the IAEA in a post-Chernobyl world.

The concept of an international atomic energy organization operating within the United Nations system was suggested by the U.N.

¹ Agreement of the International Atomic Energy Agency, *opened for signature* Oct. 26, 1956, 8 U.S.T. 1093, T.I.A.S. No. 3873, 276 U.N.T.S. 4 [hereinafter IAEA Agreement].

² P. SZASZ, *THE LAW AND PRACTICES OF THE INTERNATIONAL ATOMIC ENERGY AGENCY* 71 (Legal Series No. 7, 1970).

³ IAEA Agreement, *supra* note 1, art. IV.

⁴ *Id.* art. VIII.

⁵ *Response to Chernobyl*, INT'L ATOM. ENERGY AGENCY BULL., Summer 1986, at 62.

Atomic Energy Commission as early as December 1946.⁶ A conference was subsequently organized to draft an agreement, and the text of the statute was adopted unanimously by the conference members on October 23, 1956.⁷ Currently, there are over 100 signatories to the original statute, including all the world's major atomic energy users.

The structure of the Agency is similar to that of other U.N. offshoots. The IAEA Board of Governors is at the "heart" of the organization.⁸ This board makes most of the important decisions since the General Conference convenes only once a year.⁹ Membership on this executive board is governed by a number of complicated criteria set out in the statute.¹⁰ All Agency functions not specifically delegated by the statute are undertaken by the Director General and the IAEA staff, together comprising the Secretariat.¹¹ Most of the Agency's day-to-day activities are handled by this arm.

Article III of the IAEA Agreement sets forth the Agency's intended functions. The Agency is mandated to serve as an intermediary for the exchange of scientific and technical information on the peaceful uses of nuclear energy, and as a promulgator of safety standards.¹² The Agreement contains provisions for sending inspectors into nations receiving IAEA advice or services, but only "after con-

⁶ P. SZASZ, *supra* note 2, at 71.

⁷ *Id.* The IAEA Agreement was entered into force in July of the following year. *Id.* at 72.

Bernard Baruch, a U.S. statesman, was the first to envisage international control of atomic energy. The Baruch Plan, presented to the U.N. in 1945, would have given the Agency authority to own and operate all atomic plants and materials throughout the world. D. Fischer, Lecture Given at the Training Course on the Legal Aspects of Peaceful Uses of Atomic Energy (April 16-26, 1968), *reprinted in* NUCLEAR LAW FOR A DEVELOPING WORLD 3 (Legal Series No. 5, 1969).

⁸ The General Conference is comprised of all member states, but its powers are strictly circumscribed. IAEA Agreement, *supra* note 1, art. V.

⁹ D. Fischer, *supra* note 7, at 6.

¹⁰ IAEA Agreement, *supra* note 1, art. VI, §§ A-D.

¹¹ P. SZASZ, *supra* note 2, at 393.

¹² More specifically, the Agency is authorized:

1. To encourage and assist research on, and development and practical application of, atomic energy for peaceful uses throughout the world . . . ;
2. To make provision . . . for materials, services, equipment, and facilities . . . to meet the needs of research on, and development and practical application of, atomic energy for peaceful purposes;
3. To foster the exchange of scientific and technical information on peaceful uses of atomic energy;
4. To encourage the exchange and training of scientists and experts in the field of peaceful uses of atomic energy;
5. To establish and administer safeguards . . . in the field of atomic energy;
6. To establish or adopt . . . standards of safety for protection of health and minimization of danger to life and property . . . in the field of atomic energy;
7. To acquire or establish any facilities, plants and equipment useful in carrying out its authorized functions, whenever the facilities . . . in the area concerned are inadequate

IAEA Agreement, *supra* note 1, art. III.

sultation" with the state involved.¹³ Soon after the Agency's founding, one legal scholar commented on these powers: "These are truly unprecedented inspection powers which apply regardless of the type or extent of Agency assistance. Yet, these provisions resulted in relatively little controversy during the International Conference. *They may, however, cause considerable difficulty when the time comes to apply them.*"¹⁴

This prediction has proven accurate. The IAEA, like most international organizations, has no independent enforcement powers. Without authorization from member nations, the Agency has no means for ensuring that its standards are met.¹⁵ Over the years, however, most nations have granted the Agency various powers through agreement. Hundreds of such agreements are now registered at its offices.¹⁶ Most of the agreements concluded by the IAEA involve one of the following subject matters: Nuclear materials supply, project assistance, technical assistance, or the carrying out of Agency safeguards.¹⁷ The last of these areas has grown to be the most significant. Even in the safeguards area, however, a nation must have some incentive to allow the IAEA to come in and supervise the handling of its nuclear materials. Paul Szasz, in his definitive, albeit somewhat dated, study of Agency practice, has suggested three reasons why nations agree to the implementation of safeguards: "(a) The desire to receive international assistance for nuclear energy programmes . . . (b) Participation in some bilateral, regional or world-wide non-proliferation arrangement . . . (c) Internal or external political pressures."¹⁸ An obligation to submit to Agency safeguards can also be established by treaty.¹⁹

The IAEA Agreement specifies six areas of safeguards procedure: design review, records, reports, inspections, deposit of excess produced material, and sanctions.²⁰ All nuclear facilities that use safeguarded nuclear materials must undergo a design review.²¹ Szasz has identified a two-fold purpose for these reviews: "to determine whether the facility will per se further any military purpose and

¹³ *Id.* art. XII.

¹⁴ Bechhoefer & Stein, *Atoms for Peace: The New International Atomic Energy Agency*, 55 MICH. L. REV. 747, 784 (1958) (emphasis added).

¹⁵ P. SZASZ, *supra* note 2, at 539.

¹⁶ For a list of agreements registered with the IAEA through the end of 1982, see AGREEMENTS REGISTERED WITH THE INTERNATIONAL ATOMIC ENERGY AGENCY 3-218 (Legal Series No. 3, 9th ed. 1985).

¹⁷ P. SZASZ, *supra* note 2, at 894-97. "Safeguards" is a "term of art" within the Agency, referring to IAEA standards aimed at ensuring that nuclear materials are used only for peaceful purposes. IAEA Agreement, *supra* note 1, art. XII.

¹⁸ P. SZASZ, *supra* note 2, at 539-40.

¹⁹ *Id.*

²⁰ IAEA Agreement, *supra* note 1, art. XII, § A.

²¹ P. SZASZ, *supra* note 2, at 597.

whether it will permit the effective application of safeguards."²² In addition, records must be kept on the operation of each safeguarded facility. On the basis on these records, the state is required to submit operating and accounting reports to the Agency.²³

Perhaps the most important aspect of the safeguards system is the inspectorate which ensures compliance with Agency safeguards at facilities operating under a project agreement. As stated by Szasz,

The credibility and the reliability of the entire safeguards system of course rests on this device—for no matter what solemn undertakings are made by a State and no matter how detailed are the reports submitted, the only assurance of compliance and correctness is that which can be achieved by actual, on-the-spot checks.²⁴

The Agency is authorized to carry out initial inspections of safeguarded facilities, routine inspections of those facilities while they remain under Agency control, and special inspections in unique circumstances. The activities of the Agency's inspectorate have grown dramatically over the years. In 1985, over 1,980 inspections were carried out in 514 nuclear installations in 51 non-nuclear-weapon states and four nuclear-weapon states.²⁵ Perhaps even more significant is that, for the first time, in August 1985 a safeguards inspection took place in the Soviet Union.²⁶

Although article XII, section A of the IAEA Agreement requires the deposit with the Agency of any excess fissionable material produced under Agency safeguards, the provision has never been enforced.²⁷ In addition, because inspectors rarely encounter non-compliance with safeguards standards,²⁸ Agency sanctions are imposed infrequently.²⁹ Despite these inadequacies, IAEA safeguards activities are significant and certainly worthy of continuation.

In light of the obvious shortfalls of the current IAEA system uncovered by the Chernobyl accident, however, more guidance must be offered by the Agency. In the area of information access, no response was required of the Soviets as a member of the IAEA. Although in 1985 the Agency promulgated a set of guidelines for

²² *Id.*

²³ *Id.* at 598.

In 1985, over 21,000 state reports were processed by the Agency. The IAEA data base increased by some 15%, to approximately 4.3 million records. INT'L ATOM. ENERGY AGENCY ANN. REP. FOR 1985 59.

²⁴ P. SZASZ, *supra* note 2, at 599.

²⁵ INT'L ATOM. ENERGY AGENCY ANN. REP. FOR 1985 59.

²⁶ *Id.* at 62.

²⁷ P. SZASZ, *supra* note 2, at 600.

²⁸ *Id.* at 603. As of 1970, no significant non-compliance had been discovered by an inspector nor any sanctions imposed. *Id.*

²⁹ Possible sanctions include: curtailment of Agency assistance to the offending state, the ordered return of Agency materials and equipment, and the suspension of any non-complying member from the exercise of its rights and privileges of membership. *Id.* at 602. See also IAEA Agreement, *supra* note 1, art. XII, § (A)(7).

exchanging information in case of radiation release,³⁰ compliance with these rules is merely voluntary. Compliance is mandatory only for projects using Agency assistance pursuant to an agreement between the IAEA and that state.³¹ "Except in such instances . . . the Agency's safety standards only have the value of recommendations issued by a qualified international body."³²

As a result of the Soviets' initial reluctance to disclose information concerning the accident, two related events occurred. First, residents of neighboring countries experienced a sort of "blind fear" not knowing how or if their air, water, and food supplies might have been affected. Second, and less predictably, the fears of people around the world were unnecessarily aroused by inaccurate and inflammatory reports of the accident in the press, especially by press coverage in the United States. "It was not hard to find examples of questionable news judgment, particularly in the few days after the April 28 revelation of the accident. . . . Newspapers and television gave big play to an early UPI report of 2,000 deaths attributed to a single unidentified resident of Kiev."³³ A swift, organized information retrieval and dispersal network would have helped to ameliorate

³⁰ Guidelines on Reportable Events, Integrated Planning and Information Exchange in a Transboundary Release of Radioactive Materials, IAEA INFCIRC/321 (1985). The U.S.S.R. was among the 19 member states sending representatives to the guideline meetings. *Id.* at III.

The Guidelines, an eight page document, are far too vague in defining a "reportable event," essentially leaving the designation to the regulatory authorities of the member states. *Id.* at 3. In addition, the Guidelines lack sufficient detail in their description of the information that must be exchanged. Specifically, they recommend that the following information be made generally available in advance:

Characteristics of the facility . . . ; Relevant regulations, plans and procedures on environmental protection and radiation protection in case of an emergency; Site-development characteristics influencing the dispersion of radioactive releases; Technical information on monitoring equipment, sampling techniques, interpretation of measurements and other issues which may affect the assessment of the situation . . . ; Demographic and other relevant information for the Emergency Planning Zones.

The Guidelines go on to recommend that the following information be made available *after* the event:

Identification of the facility involved; The nature of the accident, the time at which it occurred and its possible development; The characteristics of the release; Information on meteorological and hydrological conditions, necessary for forecasting the dispersion and dilution of the release; Off-site protective measures taken or recommended; Results of environmental monitoring; Information on the development and termination of the emergency response.

Id. at 5-6.

See also Guidelines for Mutual Emergency Assistance Arrangements in Connection with a Nuclear Accident or Radiological Emergency, IAEA INFCIRC/310 (1984).

³¹ EXPERIENCE AND TRENDS IN NUCLEAR LAW 4 (IAEA Legal Series No. 8, 1972).

³² *Id.*

³³ McGrath, *Did the Media Hype Chernobyl?*, NEWSWEEK, May 26, 1986, at 31.

The "irrepressible" New York Post claimed, "Mass Grave: 15,000 Reported Buried in Nuke Disposal Site." N.Y. Post, May 1, 1986, at 1, col. 1.

both these problems.³⁴

The real irony of the Chernobyl incident is that the Soviets might have agreed to mandatory information guidelines without the prompting of a major accident. This likelihood is evidenced by their recent growing participation and interest in IAEA activities. The Soviets consistently supported the passage of the Convention on the Physical Protection of Nuclear Material, adopted October 26, 1979.³⁵ In 1977, a Soviet representative recommended that the Convention "should cover all operations involving nuclear material, including its use, storage and transportation, and also the protection of nuclear facilities."³⁶ In addition, on June 10, 1985, a safeguards agreement, which resulted from a voluntary offer by the Soviet Union to place some of its peaceful nuclear installations under Agency safeguards, entered into force.³⁷

It is crucial that neither the U.S.S.R. nor other nations be allowed to forget the lessons of the Chernobyl accident. Instead, the accident must be used as a springboard to reformation and expansion of the IAEA. In this area, some progress has already been made. At a special session of the IAEA Board of Governors on May 21, 1986, the Board reached a consensus on the establishment of two international agreements. "The first one would commit its parties to provide early notification and comprehensive information about nuclear accidents with possible transboundary effects. The other would commit its parties to co-ordinate emergency response and assistance in the event of a nuclear accident which could involve transboundary radiological release."³⁸ In addition, at a meeting of fifty-six IAEA member states in Vienna in August 1986, a consensus emerged on early notification of nuclear accidents—involving either civilian nuclear power plants, military production reactors or nuclear-propul-

³⁴ The Soviets have since released a report on the accident. This report was discussed by Soviet experts and scientists from around the world in an IAEA special meeting in Vienna from August 25-29, 1986. As reported by *SCIENCE* magazine:

There is also general agreement, both among delegates to the meeting and radiation experts in the United States, that the report provides an impressive amount of information on radiation exposures to Soviet citizens. Although there are inevitable gaps in the information, the radiation data are "better than we had a right to expect," says Warren Sinclair, president of the U.S. National Council on Radiation Protection and Measurements (NRCP).

The Aftermath of Chernobyl, *SCIENCE*, Sept. 12, 1986, at 1141.

³⁵ CONVENTION ON THE PROTECTION OF NUCLEAR MATERIAL Foreword (IAEA Legal Series No. 12, 1982).

³⁶ *Id.* at 320 (Statement by the Representative of the U.S.S.R.).

³⁷ INT'L ATOM. ENERGY AGENCY ANN. REP. FOR 1985 60. *See also supra* note 23 and accompanying text.

³⁸ *Response to Chernobyl*, INT'L ATOM. ENERGY AGENCY BULL., Summer 1986, at 61.

The Board also decided to convene a post-accident review meeting to include a wide range of experts, to convene a post-accident working group to consider other measures to improve co-operation in the nuclear safety field, and to convene a conference of government representatives to consider a wide range of nuclear safety issues. *Id.*

sion units aboard warships and submarines.³⁹ Both the United States and Soviet Union joined in this consensus.⁴⁰ This agreement and the Board proposals must now be brought to fruition.

Conclusion

Ideally, the IAEA will undergo two major reforms in the wake of Chernobyl. First, a mandatory agreement patterned on the current IAEA information exchange guidelines (but in much greater detail),⁴¹ must be promulgated by the Agency, and all member nations should be encouraged to sign. Second, the Agency must enforce already existing IAEA Agreement provisions for health and safety inspections.⁴² "The Statute leaves no doubt that compliance with the applicable health and safety measures is to be controlled by the Agency by the use of inspectors."⁴³ After about four inspections performed in the early 1960's, however, "none have been carried out since."⁴⁴ An activation of this inspectorate division, though it will require a substantial increase in the Agency's budget,⁴⁵ will help assure that the damage caused by any future "Chernobyls" is held to a minimum. Another option is to expand the number and role of the Operational Safety Review Teams (OSARTs), organized in 1983 "with a view to assisting regulatory authorities in their review of operating nuclear power plants . . . 'by providing an international frame of reference . . .'"⁴⁶ As aptly put in a leading newspaper editorial, "[i]t will be a long time before people everywhere stop dividing the history of nuclear power into two periods—pre-Chernobyl and post-Chernobyl. That allows some hope that the nations of the world will close ranks against a threat that recognizes no borders or ideological distinctions."⁴⁷

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³⁹ L.A. Times, Aug. 15, 1986, § 2, at 4, col. 1.

⁴⁰ *Id.*

⁴¹ See *supra* note 2, at 600.

⁴² IAEA Agreement, *supra* note 1, art. XII, § B.

⁴³ P. SZASZ, *supra* note 2, at 693.

⁴⁴ *Id.* at 696.

In March 1985 a new IAEA arm, the Nuclear Safety Advisory Group, met for the first time. The Group's function is to provide a forum for the exchange of information in the field of nuclear safety, but it will carry out *no* regulatory activities. INT'L ATOM. ENERGY AGENCY BULL., Summer 1985, at 52.

⁴⁵ The proposed IAEA 1986 budget provided \$33.6 million in funds for safeguards activities, \$18.6 million for general administration but only \$16.7 million for nuclear energy and safety. INT'L ATOM. ENERGY AGENCY BULL., Autumn 1985, at 61.

⁴⁶ *Id.* at 63.

⁴⁷ L.A. Times, May 11, 1986, § 5, at 4, col. 1.

