NUCLEAR LAW Bulletin

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Contents

This Bulletin includes a Supplement

December 1982

Nuclear Energy Agency
Organisation for Economic Co-operation and Development

The Organisation for Economic Co-operation and Development (OECD) was set up under a Convention signed in Paris on 14th December, 1960, which provides that the OECD shall promote policies designed

- to achieve the highest sustainable economic growth and employment and a rising standard of living in Member countries, while maintaining financial stability and thus to contribute to the development of the world economy
- to contribute to sound economic expansion in Member as well as non member countries in the process of economic development,
- to contribute to the expansion of world trade on a multilateral non discriminatory basis in accordance with international obligations

The Members of OECD are Australia, Austria, Belgium, Canada, Denmark Finland France the Federal Republic of Germany, Greece, Iceland, Ireland Italy Japan Luxembourg the Netherlands, New Zealand, Norway, Portugal, Spain Sweden Switzerland Turkey the United Kingdom and the United States

The OECD Nuclear Energy Agency (NEA) was established on 20th April 1972 replacing OECD's European Nuclear Energy Agency (ENEA) on the adhesion of Japan as a full Member

NEA now groups all the European Member countries of OECD and Australia, Canada, Japan, and the United States The Commission of the European Communities takes part in the work of the Agency

The primary objectives of NEA are to promote co-operation between its Member governments on the safety and regulatory aspects of nuclear development, and on assessing the future role of nuclear energy as a contributor to economic progress

This is achieved by

- *encouraging harmonisation of governments' regulatory policies and practices in the nuclear field, with particular reference to the safety of nuclear installations, protection of man against ionising radiation and preservation of the environment, radioactive waste management, and nuclear third party liability and insurance,*
- *keeping under review the technical and economic characteristics of nuclear power growth and of the nuclear fuel cycle, and assessing demand and supply for the different phases of the nuclear fuel cycle and the potential future contribution of nuclear power to overall energy demand,*
- *developing exchanges of scientific and technical information on nuclear energy particularly through participation in common services,*
- *setting up international research and development programmes and undertakings jointly organised and operated by OECD countries*

In these and related tasks, NEA works in close collaboration with the International Atomic Energy Agency in Vienna, with which it has concluded a Co-operation Agreement as well as with other international organisations in the nuclear field

LEGAL NOTICE

The Organisation for Economic Co-operation and Development assumes no liability concerning information published in this Bulletin

FOREWORD

This issue of the Nuclear Law Bulletin carries with it a new Analytical Index covering all thirty issues of the Bulletin published to date.

An updated version of the Index is published every five issues of the Bulletin. The main purpose of this Index is to facilitate research as well as consultation of the hundreds of notes and legislative and regulatory texts issued since its inception

The NEA Secretariat would like to take this opportunity to thank all those whose kind assistance has enabled it to publish the Nuclear Law Bulletin, whose readership continues to expand over the years.

LIST OF CORRESPONDENTS TO THE NUCLEAR LAW BULLETIN

ARGENTINA	- Mr. MARTINEZ FAVINI, Head of Legal Department, National Atomic Energy Commission
AUSTRALIA	- Office of External Relations, Australian Atomic Energy Commission
AUSTRIA	- Dr. F.W. SCHMIDT, Federal Chancellery
BELGIUM	- Mr. STALLAERT, Social Security Administration, Ministry of Employment and Labour
	- Mrs. CONRUYT, Counsellor, Head of Section, Insurance Services, Ministry of Economic Affairs
BRAZIL	- Mrs. C. DO AMARAL LINHARES GOMES LEITE, Attorney General, Comissao Nacional de Energia Nuclear
CANADA	- Mr. BARKER, Senior Counsel, Legal Services, Atomic Energy Control Board
DENMARK	- Mr. MØLLER, Head of Section, Ministry of Justice
FINLAND	- Mr. SAHRAKORPI, Senior Ministerial Secretary, Ministry of Trade and Industry
FRANCE	- Mr. MAYOUX, Deputy to the Head of the Legal Affairs Department, Atomic Energy Commission
GERMANY (Federal Republic)	- The Institute of Public International Law of Göttingen University, Department of Nuclear Law (Dr. PELZER)
GHANA	- Mr. LEBRECHT HESSE, State Attorney, Ministry of Justice
GREECE	- Greek Atomic Energy Commission
INDONESIA	- Mrs. SOEPRAPTO, Head of Legal Division, National Atomic Energy Agency
IRELAND	- Mr. SWEETMAN, Barrister-at-Law, Dublin
	- Department of Industry and Energy
ISRAEL	- Mr. NATIV, Legal Adviser of the Israeli Atomic Energy Commission
ITALY	- Mr. MARCHETTI, President of Session, Supreme Court
	- Dr. NOCERA, Head of Legal Affairs, Nuclear Safety and Health Protection Directorate, National Committee for Research and Development of Nuclear and Alternative Energies
JAPAN	- Mr. H. SASAKI, Director, Research and International Affairs Division, Atomic Energy Bureau, Science and Technology Agency
MEXICO	- Mr. SUAREZ GUTIERREZ, Head of Legal Affairs Unit, Uranio Mexico

NETHERLANDS	- Mr. VAN GALEN LAST, Head of the Atomic Affairs Section, Ministry of Foreign Affairs
	- Mr. CORNELIS, Directorate of Nuclear Energy and Radiation Protection, Ministry of Public Health and Environmental Protection
NEW ZEALAND	- Mr. W.N. MacQUARRIE, Executive Secretary, Atomic Energy Committee
NORWAY	- Mrs. I.M. SITRE, Legal Adviser, Department of Legislation, Ministry of Justice
PHILIPPINES	- Mr. CRISTOBAL, Legal Counsel for Nuclear Matters, National Power Corporation
PORTUGAL	- Mrs. A. SETTE PIMENTA, Head, International Relations of the Nuclear Energy Department, General Directorate for Energy
SPAIN	- Mr. DE LOS SANTOS LASURTEGUI, Legal Adviser, Junta de Energia Nuclear
SWEDEN	- Mr. JACOBSSON, Head, International Law Department, Ministry of Justice
	- Mr. HEDELIUS, Legal Adviser, Swedish Nuclear Power Inspectorate
SWITZERLAND	- Mr. W.A. BÜHLMANN, Head, Legal Services, Federal Office of Energy
THAILAND	- Mr. KESHAGUPTA, Director of Health Physics Division, Office of Atomic Energy for Peace
TURKEY	- Mrs. KIPER, Head of External Relations, Turkish Atomic Energy Commission
UNITED KINGDOM	- Mr. RITCHIE, Legal Adviser of the Atomic Energy Authority of the United Kingdom
	- Mr. VENABLES, Assistant Treasury Solicitor, Treasury Solicitor's Department, Department of Energy
UNITED STATES	- Mr. BERSON, Nuclear Regulatory Commission
	- Mr. SILVERSTROM, Assistant General Counsel for International Development and Defence Programmes, Department of Energy
ZAIRE	- Mr. MALU WA KALENGA, Commissioner for Nuclear Science
IAEA	- Mr. HA VINH PHUONG, Legal Division, International Atomic Energy Agency
EURATOM	- Legal Service, Commission of the European Communities
WHO	- Dr. COOPER, Principal Editor, Periodicals, World Health Organisation

LEGISLATIVE AND REGULATORY ACTIVITIES

• *Australia*

RADIOACTIVE WASTE MANAGEMENT

Code of Practice on the Management of Radioactive Wastes from the Mining and Milling of Radioactive Ores (1982)

The above Code, issued by the Department of Home Affairs and Environment, was formulated under the provisions of the Environment Protection (Nuclear Codes) Act 1978 (see Nuclear Law Bulletin No 23)

The object of the Code is to provide, both in the short and in the long term, for the protection of people and the environment from possible harmful effects associated with radioactive wastes arising from all stages of the mining and milling of radioactive ores. Although it is primarily directed towards mining and milling operations for the recovery of uranium or thorium, the Code may also be applied to other such operations producing wastes containing radioactive materials which may constitute a hazard.

The Code provides for prior development, approval and subsequent updating of a waste management programme for each mining or milling operation to which it applies, for the purpose of ensuring an approach to waste management best suited to the particular circumstances of each operation It also prescribes the duties of the owners, operators and managers of mines and mills.

The Code requires the use of the best practicable technology to ensure that the release of radioactive material is minimized during all stages of mining operations and after their completion It specifies that radioactive wastes shall be so managed that exposure to radiation of employees and the public will be as low as reasonably achievable (ALARA), and within the limits prescribed in the relevant Schedules to the Code of Practice on Radiation Protection in the Mining and Milling of Radioactive Ores (1980).

In accordance with the Act of 1978, the Code of Practice will be kept under review and revised as necessary in the light of experience

• *Brazil*

REGIME OF RADIOACTIVE MATERIALS

1982 Resolution of the Nuclear Energy Commission concerning the control of nuclear materials, certain specified equipment and materials

Resolution No. 03/82 was issued by the Nuclear Energy Commission (CNEN) on 16th April 1982 and published in the Official Gazette of 7th June 1982, Section I, Part II

The purpose of the Resolution, which is of an experimental nature, is to establish the general principles and basic requirements for control of nuclear materials as well as certain specified equipment and materials. The rules apply to the acquisition, possession, use, production and transfer of such materials and equipment. It is provided in this connection that accounting systems and inventories must be established and records kept of each operation involving the materials and equipment, in addition, regular reports must be made to the CNEN in this respect.

THIRD PARTY LIABILITY

1982 Circular concerning general conditions for insurance of nuclear risks

Circular No. 26 of 22nd July 1982 was issued by the Private Insurance Superintendence. It was published in the Official Gazette of 2nd August 1982, Section I, Part II and came into force on the day of its publication The purpose of this Circular is to approve the general conditions of insurance policies for nuclear risks Such policies must in particular provide cover, up to the amount insured, for compensation of damage of nuclear origin for which an operator who is licensed by the Nuclear Energy Commission may be held liable

Only the risks expressly provided for in the special conditions in the policy are covered, in addition, certain exclusions are listed, in particular, acts of war, civil war, insurrection and terrorism

• *Canada*

NUCLEAR LEGISLATION

Proposed amendments to the Atomic Energy Control Regulations and other draft regulations (1982)

The Atomic Energy Control Board (AECB) is preparing several draft regulations, some of which are intended to amend existing Sections of the Atomic Energy Control Regulations, 1974, and other regulations which are entirely new.

The draft regulations cover: physical security of nuclear facilities and radioactive prescribed substances, transport packaging of radioactive materials; industrial radiography; inspector powers, licensing of nuclear facilities; radiation protection; and uranium mining.

The proposed regulations for packaging of radioactive materials for transport (see Nuclear Law Bulletin No. 29) have been through an internal AECB review as well as a three-month public comment period and are now in the final stages of review. Canadian federal requirements for carriers of radioactive materials are set out in the Transportation of Dangerous Goods Act, administered by the Department of Transport. The Department is presently preparing regulations to be made pursuant to the Act which will set out further requirements for carriers of dangerous goods, including radioactive materials.

RADIATION PROTECTION

1981 Amendment to the Radiation Emitting Devices Regulations of 1972

The Radiation Emitting Devices Regulations of 10th February 1972, as amended (see Nuclear Law Bulletin Nos. 11, 26 and 28) were again amended by Order of 3rd July 1981 (SOR/81-545, Canada Gazette Part II, Vol 115 No 14 of 22nd July 1981).

The amendment concerns the specification of X-ray diffraction equipment for which design, construction and operating standards are prescribed.

• *Denmark*

RADIATION PROTECTION

1981 Order on apparatus for X-ray analysis

Order No. 571 of 7th December 1981 (Lovtidende for Kongeriget*, 1981, Part A, No. 87) was made under Order No. 56 of 17th February 1977 on the use of X-ray installations etc. (see Nuclear Law Bulletin No. 22), which prescribes that safety measures must be taken to ensure radiation protection on the basis of the recommendations of the International Commission on Radiological Protection (ICRP). The Order also implements at national level the Directive of the Council of the European Communities of 15th July 1980 amending the previous Directives laying down basic safety standards for protection against ionizing radiation (see Nuclear Law Bulletin No 26). This Order came into force on 1st January 1982.

REGIME OF RADIOACTIVE MATERIALS

1981 Order on exemptions from the 1953 Act on Radioactive Substances

Order No. 546 of 9th November 1981 (Lovtidende for Kongeriget, 1981, Part A, No. 82) was made under Act No. 94 of 31st March 1953 concerning radioactive substances and exempts certain radioactive materials from the licensing system laid down by the Act. This Order, which came into force on 1st January 1982, repeals Order No. 127 of 31st March 1953 concerning such exemptions.

• *France*

ORGANISATION AND STRUCTURE

1982 Decree amending the Decrees of 1970 and 1972, as amended, concerning the Atomic Energy Commission

Decree No. 82-734 of 24th August 1982 (published in the Official Gazette of 26th August 1982) further amends Decree No. 70-878 of 29th September 1970 (see Nuclear Law Bulletin No. 28) as well as Decree No 72-1158 of 14th February 1972; the purpose of the Decree is to give the Atomic Energy Commission (CEA) wider duties and to modify the structure and certain responsibilities of its directing bodies. While the CEA's responsi-

* Official Gazette.

bilities under previous regulations are maintained in full, they have now been placed in a regional dimension in accordance with the principles set out in the Act of 15th July 1982 concerning orientation and planning of technological research and development in France. The CEA will contribute at a regional level to technological development, industrial enhancement of research, dissemination of scientific and technological information and to training. In connection with the directing bodies of the CEA, the composition of the *Atomic Energy Committee* remains largely unchanged The Committee decides the working programme of the CEA, its financing and participation, general nuclear policy matters may also be referred to the Committee. The new Decree sets up a *Board of Management* chaired by the Administrator-General. The Board includes representatives of the Government as well as staff representatives designated on proposal by the unions The Board considers the general organisation of the CEA, employment and salary conditions. As regards financial matters, the Board may authorise loans as well as the purchase and sale of property, all previously within the sole competence of the Atomic Energy Committee. The *Scientific Council*, which assists the High Commissioner in particular by proposing the scientific orientation of the CEA, now includes members appointed following consultation with the most representative unions in the establishment, in addition to members appointed on ministerial proposal and on proposal by the Administrator-General.

The Decree also defines the rules of procedure for the three above bodies.

REGIME OF RADIOACTIVE MATERIALS

1982 Order on the technical conditions for the follow-up of and accounting for nuclear materials

This Order of 24th June 1982 was made under the Act of 25th July 1980 on protection and control of nuclear materials and the Decree of 12th May 1981 made in pursuance of the Act (see Nuclear Law Bulletin Nos 26 and 28). This technical Order, which is included in the series of measures recently taken in France to guarantee the control of nuclear materials, lays down detailed provisions to be complied with by licensees under the 1980 Act. These provisions cover, in particular, records, accounting procedures and physical inventories for the different categories of nuclear materials.

The Order specifies that the Institute for Protection and Nuclear Safety (IPSN) is the body responsible for centralizing these data at national level

RADIOACTIVE WASTE MANAGEMENT

1982 Decree publishing amendments to Annexes I and II of the 1972 London Dumping Convention

Decree No. 82-426 of 19th May 1982 (Official Gazette of 24th/25th May 1982) published amendments to the above Annexes of the London Convention on Prevention of Marine Pollution by the Dumping of Wastes and Other Matter (see Nuclear Law Bulletin Nos. 20, 24 and 26) and the Resolution on incineration at sea, adopted in 1978 and in operation since 1979

These provisions refer to incineration of waste at sea; they apply to radioactive waste and other radioactive materials. Incineration at sea of such waste and materials (excluding those which are highly radioactive) is authorized only following the delivery of a specific permit by the competent national authority and must be carried out in compliance with strict control rules.

• *Federal Republic of Germany*

REGIME OF NUCLEAR INSTALLATIONS

Revision of 1977 Ordinance on the Licensing Procedure for Nuclear Installations (1982)

The Ordinance of 18th February 1977 on the licensing procedure for nuclear installations (see Nuclear Law Bulletin No. 19), made under Section 7 of the Atomic Energy Act, was amended by an Ordinance (First Amendment) of 31st March 1982 (Bundesgestzblatt 1982, I, p. 409) which came into force on 1st May 1982. The changes in the licensing procedure concern, in particular, public notifications in certain specified cases, all relevant to the safety of the nuclear installation in question (see Nuclear Law Bulletin No 29)

The consolidated text of the Ordinance is reproduced in the Supplement to this issue of the Bulletin.

RADIOACTIVE WASTE MANAGEMENT

1982 Ordinance on advance payment of fees for federal radioactive waste storage installations

On 28th April 1982 an Ordinance was issued on advance financial contributions towards the construction of federal installations for the safe containment and disposal of radioactive waste (Bundesgestzblatt 1982, I, p. 562). Prepayment of fees prescribed in the Ordinance provides for the financial means required to cover the expenses of the Federal repository for radioactive waste in accordance with Section 9a, paragraph 3 of the Atomic Energy Act. This includes costs for research and development in connection with the installation, the price of the site, planning costs, and expenditure for the erection, enlargement and restoration of installations.

All holders of a licence in accordance with the Atomic Energy Act or the Radiation Protection Ordinance, and who, in all likelihood, will be obliged to despatch radioactive waste to the Federal repository must pay such advance fees. The Ordinance specifies a precise formula for the advance contributions which holders of the different types of nuclear licen-

ces must make: 75.5% of the total expenses are to be paid by the operators of large reprocessing installations, 4% by the operators of small reprocessing installations, 17.5% by the operators of nuclear power plants (above 200 MW), and 3% by the other licensees.

The Ordinance furthermore contains regulations on the repayment of advance fees and on the payment of interests in special cases. The Ordinance will remain in force until 31st December 1986 at the latest It marks an important step in fulfilling the legal obligation of the Federal Government to erect and operate an installation for the final storage of radioactive waste, and at the same time, it defines the financial responsibility of the nuclear industry.

A translation of the Ordinance is reproduced in the "Texts" Chapter of this issue of the Bulletin.

• *Italy*

ORGANISATION AND STRUCTURE

1982 Act reorganising the CNEN as the ENEA - Amendment of the 1971 Act

Act No. 84 of 5th March 1982 (published in Official Gazette No 79 of 22nd March 1982) made substantial amendments to Act No. 1240 of 15th December 1971 concerning the National Nuclear Energy Commission (CNEN) (see Nuclear Law Bulletin Nos. 1, 2 and 9). The purpose of the amendments was to reorganise the CNEN as a new body, the National Commission for Research and Development of Nuclear and Alternative Energy Sources (*Comitato Nazionale per la Ricerca e per lo Sviluppo dell'Energia Nucleare* et delle Energie Alternative, ENEA). The ENEA, which has been given great flexibility and autonomy, is responsible for R and D in nuclear and alternative energy sources and will undertake as well as promote studies and demonstration of energy technologies within its field (see Nuclear Law Bulletin No. 29).

The text of the Act of 1971, as amended by the Act of 1982, is reproduced in the Supplement to this issue of the Bulletin

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Act No. 85 of 18th March 1982 on financing the ENEA five-year programme which came into force on 23rd March 1982 should be recalled in the context of this reorganisation (see Nuclear Law Bulletin No 29) The Act illustrates the present legislative trend in Italy concerning activities

entailing major risks in that it specifies (Section 4) that the body responsible for control, inspection and supervision of nuclear activities, namely the Directorate for Nuclear Safety and Public Health within the ENEA, will be granted independence and autonomy one year from the entry into force of the Act

RADIATION PROTECTION

1982 Decree implementing nationally the EEC Directive on standardization of safety signs in workplaces

Decree No. 524 of the President of the Republic of 8th June 1982 (published in Official Gazette No. 218 of 10th August 1982) implements at national level Directive No. 77/576 of 27th July 1977 of the Commission of the European Communities, as amended by Directive No. 79/640 of 21st June 1979.

The Directive provides for the standardization by Member States of their legislative, regulatory and administrative provisions concerning safety signs in workplaces, including radioactivity symbols.

REGIME OF RADIOACTIVE MATERIALS

1982 Decree on the conditions for notification of radioactive materials

This Decree of 25th September 1982 issued by the Ministry of Industry, Commerce and Crafts, amends a similar one of 27th July 1966 made in implementation of Presidential Decree No. 185 of 1964 on radiation protection

Practice has shown the need for improvement and simplification of the conditions for notifying radioactive materials and updating of notifications According to the new Decree, the possession of radioactive substances is to be notified to the competent authorities by filling in a special form, a model of which is attached to the Decree.

• *Netherlands*

RADIATION PROTECTION

1981 Decrees amending the 1969 Radioactive Materials Decree and the 1969 Devices Decree respectively

Two Decrees, both dated 24th June 1981, modify regulations concerning radiation protection under the 1963 Nuclear Energy Act. The first

Decree (Stb* No 501) amends the Radioactive Materials Decree of 10th September 1969 (Stb No 404) while the second Decree (Stb No 502) amends the Devices Decree also of 10th September 1969 (Stb No 406) (see Nuclear Law Bulletin No. 8).

The new Decrees have a twofold purpose to incorporate certain provisions of the Ionizing Radiation (Safety) Decree of 18th March 1963 (Stb No. 98) in the 1969 Decrees as well as certain rules contained in the 1964 Mining Regulations (Stb No. 538) concerning radioactive materials, radiation-emitting equipment and mining and drilling activities, and to embody in the national legislation the Directive of the Council of the European Communities of 1st June 1976 laying down revised basic safety standards for the health protection of the general public and workers against the dangers of ionizing radiation, as amended by the Directive of 27th March 1979 (see Nuclear Law Bulletin Nos. 18 and 25).

The radiation protection provisions in the regulations made under the Nuclear Energy Act include occupationally exposed persons in addition to the general public.

The Ionizing Radiation (Safety) Decree of 1963 was repealed by Decree of 12th October 1981 (Stb No. 672). This measure will become effective by Decree on 1st January 1983.

• *Portugal*

THIRD PARTY LIABILITY

Bill on third party liability in the nuclear field (1982)

Portugal is a Contracting Party to the 1960 Paris Convention on Third Party Liability in the Field of Nuclear Energy (see Nuclear Law Bulletin No. 20). In addition, the Portuguese Government intends to become a Party to the 1963 Brussels Convention Supplementary to the Paris Convention and has published it by Decree No. 38/82 of 31st March 1982 in the Official Gazette No. 75 of the same date.

In parallel, a Bill on third party liability in the field of nuclear energy has been prepared according to the principles of both the above Conventions and is presently being considered by Parliament The principles may be summarized as follows: channelling of liability on to the nuclear operator, limitation of such liability in amount and in time, obligation for the operator to take out insurance or other financial security, his exoneration from liability in certain specified cases, State intervention and designation of competent court.

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* Staatsblatt: Bulletin of Acts, Orders and Decrees

• *Spain*

ORGANISATION AND STRUCTURE

1982 Royal Decree concerning the Statute of the Nuclear Safety Council

Royal Decree No 1157/1982 of 30th August 1982 approves the Statute of the Nuclear Safety Council, set up by Act No. 15 of 22nd April 1980 (see Nuclear Law Bulletin No 25). The Decree, which was published in Official Gazette No. 135 of 7th June 1982, came into force the day following its publication

The Decree, made in implementation of the Act of 1980, further details the status, responsiblities, structure and rules of procedure of the Nuclear Safety Council as well as its staff rules.

As provided for under the Act of 1980, the Council is a body governed by public law with legal personality and administrative and financial autonomy. It has overall competence in matters related to nuclear safety and radiation protection. The Nuclear Safety Council proper is composed of a Chairman and four Counsellors appointed by the Government for a period of six years which is renewable. The Council is assisted in its work by a Secretary-General, also appointed by the Government.

The Decree also specifies the structure of the different directorates under the Council as well as their duties and those of the General Secretariat which, under the direct authority of the Chairman, is responsible for the execution of the Council's programme of activities.

Finally, the Decree also provides for the setting up of a body of technical staff within the Council and prescribes its status and duties.

RADIATION PROTECTION

1982 Royal Decree on Radiation Protection

Royal Decree No. 2519/1982 of 12th August 1982 approves the Regulations on Protection against Ionizing Radiation (published in Official Gazette No. 241 of 8th October 1982) The purpose of the Regulations is to implement the radiation protection principles laid down in the framework Act on Nuclear Energy of 29th April 1964, as amended.

The very detailed Regulations, which supersede all existing national rules in the same field, contain administrative and technical provisions governing nuclear and radioactive installations and activities, including the use of radiation-emitting equipment. They were made in compliance with the most recent international regulations on radiation protection and safety, in particular the Recommendations of the International Atomic Energy Agency (IAEA), the Regulations also take into account the recent Euratom Directives

The competent authorities in connection with implementing the Regulations are the Ministry of Industry and Energy, the Ministry of Health and, in particular, the Nuclear Safety Council, without prejudice to the specific competence of other Ministries and authorities

The Regulations, which provide for basic radiation protection measures for occupationally exposed workers, individuals and the population as a whole, lay down provisions concerning radioactive waste, medical examinations, inspection of installations and activities likely to create radiation hazards as well as detailed sanctions for violation of the Regulations The Three Annexes contain definitions, exposure dose limits and values corresponding to annual exposure dose limits, which are detailed in tables

It should be noted that the part of the Regulations which deals with sanctions refers to the relevant provisions of the Nuclear Energy Act of 1964 and the Act of 1980 setting up the Nuclear Safety Council

REGIME OF NUCLEAR INSTALLATIONS

1982 Royal Decree concerning State intervention in the Lemoniz nuclear power plant

Royal Decree No. 12/1982 of 27th August 1982 (published in Official Gazette No 210 of 2nd September 1982) regulates State intervention in the completion of the Lemoniz nuclear power plant and came into force on the day of its publication.

The purpose of the Decree is to accelerate achievement of the plant in implementation of the National Energy Plan and, to this effect, it sets up an "Intervention Council" which is responsible for directing the work at the plant and is empowered to adopt the measures it considers necessary for discharging its duties. The Council is made up of a maximum of five members appointed by the Government and two other members respectively appointed by the Company which owns the Lemoniz nuclear power plant and the Company which operates it.

• *Sweden*

ORGANISATION AND STRUCTURE

National Board for Spent Nuclear Fuel

The National Board for Spent Nuclear Fuel is a Government body created on 1st July 1981 (Instruction 1981.672) further to the passing of the 1981 Act on the financing of future expenditure for spent nuclear fuel etc. (see Nuclear Law Bulletin No. 29). The supervisory and financial duties laid down in the Act have been delegated by the Government to the Board which is entrusted in particular with:

- following developments within the nuclear power field, especially with respect to spent nuclear fuel and its waste products, and decommissioning,

- evaluating the work and future plans of the Swedish Nuclear Fuel Supply Company (SKBF), which represents the reactor owners and advising the Government on these plans,

- initiating research and development complementary to the work of SKBF so as to widen the base of decisions on waste management actions,

- proposing to the Government a fee in ore/kwh on electric power delivered from nuclear plants This fee is determined yearly and paid by the utilities to the Board. The fees are accumulated in a fund administered by the Board.

RADIOACTIVE WASTE MANAGEMENT

1981 Ordinance on financing future expenditure for spent nuclear fuel etc.

This Ordinance (1981 671), which entered into force on 1st July 1981, specifies that the National Board for Spent Nuclear Fuel (see above) settles questions and otherwise performs the supervisory and financial duties laid down in Sections 4, 7 and 10 of the 1981 Act on the financing of future expenditure for spent nuclear fuel etc. (see Nuclear Law Bulletin No. 29).

The Ordinance contains detailed provisions on the contents of the different programmes of activities mentioned in the Act and lays down rules as to the payment of fees and management of the fund set up under the Act.

A translation of the Ordinance is reproduced in the "Texts" Chapter of this issue of the Nuclear Law Bulletin

• *Turkey*

ORGANISATION AND STRUCTURE

1982 Act establishing the Turkish Atomic Energy Authority

The purpose of Act No. 2690 of 9th July 1982 is to reorganise the former Turkish Atomic Energy Commission (TAEC) into the Turkish Atomic Energy Authority (TAEA) in order to provide it with greater powers. The Act came into force on the date of its publication (Official Gazette of 13th July 1982).

The major changes brought about by the Act may be summarized as follows:

While remaining under the direct supervision of the Prime Minister, the TAEA will have legal personality, with more independence and flexibility from the financial and administrative viewpoints. This will enable it to increase its qualified staff and to acquire better facilities By providing for immunities and privileges, the Act facilitates the transfer of peaceful nuclear technology to Turkey; national obligations in accordance with international agreements, in particular, concerning safeguards and physical protection are also laid down in the Act

Within the framework of determined principles and programmes, the Chairman of TAEA is responsible for fulfilment of the duties prescribed to the Authority by the Act. He represents the TAEA and administers it with the assistance of three Deputy Chairmen.

The TAEA includes a number of specialized technical and administrative departments, namely

- the Department of Nuclear Safety
- the Department of Radiation Safety and Health
- the Department of Research and Development and Co-ordination
- the Department of Technology
- the Department of Administrative and Financial Affairs

Regulations pursuant to the new Act are to be made by the Turkish Atomic Energy Authority before 13th July 1983. The provisions of the present administrative and technical regulations which are not contrary to the new Act will be in effect until entry into force of the above-mentioned regulations.

• *United States*

REGIME OF RADIOACTIVE MATERIALS

1982 Act on Physical Protection of Nuclear Material

On 18th October 1982, President Reagan signed into law the "Convention on the Physical Protection of Nuclear Material Implementation Act of 1982". This Act amends the United States Federal Criminal Code to create the following federal crimes: nuclear extortion, theft of nuclear material and similar serious offenses involving nuclear material. The Act establishes jurisdiction over most of these offenses wherever committed Offenders are subject to a system of extradition or submission for prosecution. The Act also provides that in emergencies the United States Attorney General can obtain enforcement assistance from the Department of Defense.

The United States Senate approved the Convention on the Physical Protection of Nuclear Material by a vote of 98-0 in July 1981, but formal ratification of the Convention by the President was delayed pending the passage of the Implementation Act. Since the Act has now been signed, ratification of the Convention is expected very soon.

Amendment of Regulations on physical protection of special nuclear material in transit (1982)

Effective on 3rd June 1982, the Nuclear Regulatory Commission (NRC) amended its regulations in 10 CFR Part 73, "Physical Protection of Plants and Materials", to improve licensee capabilities for early detection of attempted theft of nuclear material of moderate strategic significance while it is being transported The amendments complement provisions in the Commission's existing regulations which allow the NRC to order shipment delays for safeguards purposes. By providing for better traceability and closer licensee control over shipments, the need to delay shipments to prevent the possible accumulation by an adversary of a formula quantity of strategic special nuclear material will be decreased. The improvements include keeping the material under lock or under the control of a responsible individual, confirming the status of shipments while they are on the way, and employing either exclusive-use trucks or an arrangement whereby all custody transfers are acknowledged by signature The material covered by the amended regulations is (1) between 500 grams and 2 kilograms of plutonium or ^{233}U, (2) between 1 and 5 kilograms of ^{235}U contained in uranium enriched to 20% or more, and (3) 10 kilograms or more of ^{235}U contained in uranium enriched to at least 10% but less than 20%.

Policy Statement on use of high-enriched uranium in research reactors (1982)

On 24th August 1982, the Nuclear Regulatory Commission (NRC) issued a policy statement on the use of high-enriched uranium (HEU) in research reactors The statement expresses the Commission's concern with the proliferation risks associated with inventories of high-enriched uranium fuel for research and test reactors abroad and its interest in allaying that concern by reducing the use of high-enriched uranium fuel in both domestic and foreign research reactors to the maximum extent possible. Noting the current progress of the Reduced Enrichment for Research and Test Reactors (RERTR) programme in the development and performance testing of low-enriched uranium (LEU) fuels, the commission announced that it "is prepared to act expeditiously to review the use of the new fuel in domestic research and test reactors licensed by NRC" as soon as all the necessary tests are completed. The Commission also stated that it "intends to continue its current practice of careful scrutiny to verify that additional interim HEU exports are justified" and that it "plans to continue to monitor the progress of the RERTR programme so that it can understand what would be appropriate conversion schedules, and to encourage that actions be taken to eliminate United States-supplied inventories of HEU to the maximum degree possible" The policy statement notes that "the objectives of the RERTR programme have been fully supported by NRC since its inception" and that the Commission "is pleased . that the current Administration continues to support the RERTR programme and that Congress has approved adequate funding for the programme".

Proposed revision of Regulations on unclassified activities in foreign atomic energy programmes (1982)

On 17th September 1982, the Department of Energy (DOE) published proposed revisions to its regulations, 10 CFR Part 810 "Unclassified Activities in Foreign Atomic Energy Programmes" (export of sensitive nuclear technology). The proposed revisions would add a number of countries to the list of countries in which United States nationals may not directly or indirectly engage in the production of special nuclear material unless specifically authorized by the Secretary of Energy. Added to the present list of countries would be all countries that are not party to the Treaty on the Non-Proliferation of Nuclear Weapons (except those countries that accept full scope safeguards or those countries for which the Treaty of Tlatelolco is currently in force) and certain countries in regions of particular volatility and sensitivity.

The regulations would continue to require a specific authorization by the Secretary of Energy for United States nationals to engage in activities outside the United States relating to the design, construction, fabrication or operation of any of the four sensitive nuclear facilities (i e , enrichment, reprocessing, heavy water, mixed-oxide fuel) or equipment especially designed, modified or adapted for use in such facilities, or training foreign personnel or furnishing information not available to the public in published form for use in any of the above.

RADIOACTIVE WASTE MANAGEMENT

Status of proposed waste management legislation (1982)

Nuclear waste management legislation is being given very serious consideration by the 97th Congress of the United States (see Nuclear Law Bulletin No. 28). There are two versions of proposed legislation, both entitled "Nuclear Waste Policy Act of 1982". Both versions contain fundamental elements that would provide the basis for a comprehensive nuclear waste management programme: a Federally-owned and operated high-level waste repository, an interim storage programme with a time and capacity limitation; the requirement for a Department of Energy proposal for a Monitored Retrievable Storage Facility; funding by users of the facilities, state participation and objection procedures, and a research and development programme. Additionally, both versions streamline applicable National Environmental Policy Act (NEPA) procedures, which would aid in expediting implementation of the programme.

The Bills differ in many respects. For example, under the Senate Bill, if a state or Indian tribe objects to a selected repository site, one House of Congress must sustain the objection in order to give it effect The House of Representatives Bill, on the other hand, provides that if a state or Indian tribe objects, the site is disapproved unless both Houses pass a joint resolution approving the site. Other areas in which the Bills diverge include, *inter alia*, the repository construction schedule, the number of sites to be characterized, the requirements of the interim storage programme, the inclusion of transuranic waste and restrictions on the use of special nuclear material.

On 29th April 1982, the Senate passed its version of the legislation, S. 1662, the House of Representatives has not yet passed its version, H.R. 7187. It is expected that the Bill will be considered by the House

during the short session that begins after the elections, on 29th November 1982. If the House does pass H.R. 7187, the difference in the Bills will have to be reconciled by a House-Senate Conference Committee.

CASE LAW

• *Netherlands-United Kingdom-Belgium*

1982 RADIOACTIVE WASTE SEA DUMPING OPERATIONS*

The dumping of solidified low-level radioactive waste at sea, in accordance with the provisions of the 1972 London Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter, and relevant national law, is undertaken by the United Kingdom and Netherlands authorities and takes place under the supervision of the OECD Nuclear Energy Agency, and in accordance with the recommendations of the International Atomic Energy Agency. This year three dumping operations were carried out, one by the United Kingdom authority and two by the Netherlands authorities, in conjunction with Belgian and Swiss authorities

For some years now operations of the kind described above have been the focus of protest action, notably by the Greenpeace environmental organisation. Relevant national authorities in the United Kingdom and the Netherlands have been constrained to take legal action, as described below, in order to establish the legal position and to obtain such protection as the law of the relevant countries is able to provide.

I. United Kingdom Judgment in the High Court of Justice, Queens Bench Division, Admiralty Court - 2nd July 1982

Parties:

UNITED KINGDOM ATOMIC ENERGY AUTHORITY, Plaintiff

GREENPEACE LIMITED, First Defendant

GREENPEACE (RAINBOW WARRIOR HOLDINGS) LIMITED, Second Defendant

PETER JAMES WILKINSON (Director), Third Defendant

STICHTING GREENPEACE NEDERLAND, Fourth Defendant

UPON HEARING Counsel for the Plaintiffs and the fourth Defendants on the Plaintiff's application for service of the writ out of jurisdiction on the fourth Defendants, the judge ordered that

* Unofficial translation and text contributed by the United Kingdom authorities.

1 The Plaintiffs have leave to issue a concurrent writ herein and to serve it out of jurisdiction on the fourth Defendants at Damrak 83, Amsterdam (Postbus 11026 Amsterdam) or elsewhere in Holland.

2. The time for acknowledgement of service be 21 days after service.

3. The fourth Defendants do pay the Plaintiffs their costs of this application.

4. The fourth Defendants have leave to appeal.

AND, UPON HEARING Counsel for the Plaintiffs, on the Plaintiff's application for an injunction the judge further ordered that the Defendants by themselves, their agents, servants or otherwise by the vessel SIRIUS or any vessel under their direction or control be restrained, and an injunction is hereby granted restraining them from causing or permitting physical interference with the dumping into the sea of nuclear waste products by the vessel GEM pursuant to a license granted 24th June 1982, to the Plaintiffs pursuant to the Dumping at Sea Act 1974, until further order

And that the costs of this application be costs in the case.

NOTE

The first three Defendants abided by the terms of the English injunction, but the fourth Defendant did not acknowledge it as binding, with the result that on 12th August 1982, the fourth Defendants, by the use of their ship SIRIUS, commenced physical interference with the operations of the United Kingdom Atomic Energy Authority (UKAEA) dumping ship the GEM, (a) by boarding the ship and occupying the dumping platforms in such a way as to prevent those platforms being used, and, (b) by harassing the dumping operation, then carried out from addition platforms, by endeavouring to navigate inflatable boats so as to hinder the dumping. Accordingly, the UKAEA commenced summary proceedings in the Amsterdam District court on Friday 13th August 1982, when (in the course of a hearing by the Vice-President) the Defendants agreed to cease their current activities, whereupon the first leg of the application was withdrawn without judgment being given, and the Plaintiffs were allowed a delay in which to consider whether they wished to proceed with the second leg of their application for a permanent injunction. In the meantime, the Netherlands sea dumping operation got under way, and was subjected to similar physical interference by Greenpeace. The Dutch authority, the Energieonderzoek Centrum Nederland (ECN), accordingly applied in a similar way to the Amsterdam District Court. The judgments rendered by the Amsterdam District Court are referred to below, in date order, but readers should note that the second judgment set out below, which concerns the UKAEA, was in fact a continuation of the application which first came before the District Judge on Friday 13th August 1982.

II. Netherlands Judgment in the Amsterdam District Court

(a) Case No. KG 82/1048 26th August 1982

Parties:

ENERGIEONDERZOEK CENTRUM NEDERLAND, Plaintiff

STICHTING GREENPEACE NEDERLAND, First Defendant

STICHTING GREENPEACE INTERNATIONAL, Second Defendant

STICHTING GREENPEACE COUNCIL, Third Defendant

GREENPEACE LIMITED (United Kingdom), Fourth Defendant
(no appearance)

Case No. KG 82/1049

Parties:

ENERGIEONDERZOEK CENTRUM NEDERLAND, Plaintiff

GREENPEACE LIMITED, Defendant (no appearance)

J U D G M E N T S

In the case No. 82/1048.

1. Rejects the default for non-appearance against the fourth defendant and declares the summons void to such extent.

2. Rejects the requested provisions against the second defendant

3. Condemns ECN in the cost of the proceedings on the part of the second and fourth defendants estimated to be nil

In the case No. 82/1049

4. Allows default for non-appearance against the non-appearing defendant.

In the cases Nos. KG 82/1048 and 1049.

5. Orders defendants jointly and severally not to make the dumping of the cargo of the "Scheldeborg" in any way impossible, under penalty of a fine of Dfl* 250,000.

6. Declares the judgment in so far as possible executable by anticipation.

7. Rules that each party pay its own costs.

8. Dismisses what has been claimed additionally or otherwise

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* Dfl. Dutch florins.

(b) Case No. KG 82/1001 9th September 1982

Parties·

UNITED KINGDOM ATOMIC ENERGY AUTHORITY, Plaintiff

STICHTING GREENPEACE NEDERLAND, First Defendant

STICHTING GREENPEACE INTERNATIONAL, Second Defendant

STICHTING GREENPEACE COUNCIL, Third Defendant

JUDGMENT

1. Disallows the requested injunction against the second defendant.

2. Orders the first and third defendants not to make the dumping activities impossible, under a penalty of a fine of Dfl. 100,000.

3. Orders the first and third defendants not to board the dumping ship with the intention of preventing or impeding the dumping or to take action, having that effect, under a penalty of a fine of Dfl. 50,000 for each violation of this prohibition, plus Dfl. 10,000 for each day that a violation continues.

4. Orders the first and third defendants not to aid or abet activities of the sort described in paragraphs 2 and 3 above by third parties, or to incite third parties thereunto, under penalty of a fine of Dfl. 50,000 for each violation of this prohibition.

5. Forbids the first and third defendants to navigate their "action ship"* towards the dumping ship contrary to the rules of proper seamanship, under penalty of a fine of Dfl. 10,000 for each violation of this prohibition.

6. Declares this judgment enforceable by anticipation to this extent.

7. Condemns first and third defendants in the cost of these proceedings, estimated to be Dfl. 177.05 for disbursements and Dfl. 1,00 for professional fees.

8. Dismisses any additional or other claims.

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* Note by the Secretariat: reference to the Sirius.

(c) Case No. KG 82/1159 16th September 1982

Parties:

STUDIECENTRUM VOOR KERNENERGIE SCK/CEN (BELGIUM), First Plaintiff

ENERGIEONDERZOEK CENTRUM NEDERLAND, Second Plaintiff

STICHTING GREENPEACE NEDERLAND,First Defendant

STICHTING GREENPEACE INTERNATIONAL, Second Defendant

STICHTING GREENPEACE COUNCIL, Third Defendant

GREENPEACE LIMITED (UNITED KINGDOM), Fourth Defendant

GREENPEACE (RAINBOW WARRIOR HOLDINGS) LIMITED (UNITED KINGDOM, Fifth Defendant

JUDGMENT

1. Orders defendants jointly and severally not to board the "De Rijnborg" or other dumping ships employed by the plaintiffs or one of the plaintiffs with the intention, by their conduct, of preventing or hindering the dumping operation, or with the result that their conduct prevents or hinders the dumping operation, under penalty of a fine of Dfl. 50,000 for each breach of this injunction, plus Dfl. 10,000 for each day during which a breach continues.

2. Orders defendants jointly and severally not to prevent or hinder the dumping operation by placing themselves at or close to the place where the drums are likely to fall into the sea, under the penalty of a fine of Dfl. 50,000 for each breach of this injunction.

3. Orders the defendants not to lend actual support to third parties, to incite third parties or to provide means to third parties for the purpose of conducting the said activities under penalty of a fine of Dfl. 50,000 for each breach of this injunction.

4. Orders the defendants not to position their protest vessels* in relation to the dumping ship in a manner which contravenes the relevant rules of navigation and the principles of good seamanship.

5. This ruling shall be implemented forthwith notwithstanding the defendants' right of appeal.

6. The defendants are ordered to pay the costs of the action, estimated at Dfl. 288.90 by way of disbursements and Dfl. 1000 for professional fees.

7. In so far as it exceeds or differs from the above, the application is rejected.

* Note by the Secretariat: reference to the inflatable boats used in the protest action

In addition to the above judgments, the Vice-President of the District Court issued the following explanatory memorandum relating to the ruling of 16th September 1982

1. The first Greenpeace ruling (Cases Nos. 82/1048 and 1049) lays down that protest actions should not be judged primarily by reference to criteria relating to the unlawfulness of the act but according to criteria pertinent to the actual case itself

   Exactly what actions Greenpeace had in mind was not clear at the time, so that a ruling could not then be delivered on that subject in anticipation It was, however, ruled that the act of making dumping *impossible in every case* exceeded the bounds of what was acceptable.

   The precept according to which 'hindrance is permitted while prevention is not' is therefore not entirely correct.

2. In the second case (Case No. 82/1001) it had become clear what actions were involved, i.e.:

   (a) The boarding of the ship by demonstrators, who chained themselves to the platforms;

   (b) The positioning of small boats at or close to the point at which the drums would enter the sea, thereby preventing dumping;

   (c) Dangerous navigation on the part of the protest vessels and the small boats.

   The court ruled in this case that boarding the ship for the purpose of chaining oneself to the platforms is unlawful.

   A general ruling prohibiting the boarding of a dumping ship was not delivered as it is not possible to determine whether circumstances could occur which might justify the boarding of the dumping ship.

   At that time a ruling prohibiting the positioning of small boats at or close to the actual dumping point was not delivered in the absence of sufficient grounds, since the GEM could screen off the actual dumping spot with sheet metal enclosures A ruling was, however, delivered prohibiting the protest vessel from navigating in a dangerous manner.

3 The "De Rijnborg" and other Dutch dumping ships do not (like the GEM) operate with platforms, but with derricks. On these ships it is not possible to work with sheet metal enclosures.

   It is therefore now necessary to consider whether the positioning of small boats at or close to the dumping spot must be accepted in the context of a protest action. This issue is dealt with in the third ruling.

• *United States*

NRC DECISION ON THE CLINCH RIVER BREEDER REACTOR (1982)

On 5th August 1982, the United States Nuclear Regulatory Commission (NRC) voted to authorize the United States Department of Energy (DOE), the Project Management Corporation, and the Tennessee Valley Authority to conduct site preparation activities in connection with the Clinch River Breeder Reactor Project (CRBRP). On 17th August 1982, the NRC issued its Order to this effect. Specifically, the NRC determined that

1. Grant of site preparation activities was authorized by law,

2. Grant of site preparation activities would not endanger life or property or the common defense and security, and

3. Grant of site preparation activities would be in the public interest because:

   - Only insignificant environmental impacts will result from site preparation activities;

   - Impacts from site preparation activities are fully redressable,

   - Reasonable alternatives will not be foreclosed, and

   - Delay would be contrary to the public interest

This action by the NRC authorizing site preparation was followed by a number of court challenges seeking to prevent such activities from occurring.

On 12th August 1982, the Natural Resources Defense Council (NRDC) and the Sierra Club, intervenors in the underlying NRC licensing proceeding for the Clinch River Breeder Reactor, filed with the United States Court of Appeals for the District of Columbia circuit, a petition for judicial review of the NRC's Order and requested a stay of the Order. The stay request was denied on 6th October 1982.

On 24th August 1982, NRDC and the Sierra Club filed suit in the United States District Court for the Northern District of Georgia, against, *inter alia*, the CRBRP, DOE, and the Environmental Protection Agency (EPA) That suit sought declaratory and injunctive relief against an agreement executed between the EPA and the CRBRP which permitted site preparation to begin at the CRBRP prior to the issuance of a National Pollutant Discharge Elimination System (NPDES) permit. That agreement covered only site preparation activities already covered by the NRC's Order of 17th August 1982. On 2nd September 1982, the District Court granted the motion for a preliminary injunction "until such time as a final environmental impact statement is issued by EPA."

The District Court's preliminary injunction against site preparation activity was reviewed on an expedited basis by the Eleventh Circuit, which on 21st September 1982 reversed and dissolved the injunction NRDC and Sierra Club's subsequent petition for rehearing of this decision was denied by the Eleventh Circuit.

On 22nd September 1982 the NRDC filed suit in the United States District Court for the District of Columbia, challenging the CRBRP and the entire Liquid Metal Fast Breeder Reactor (LMFBR) programme, based upon alleged deficiencies in DOE's LMFBR programmatic environmental impact statement That case is still pending.

STATE BANS ON NUCLEAR ENERGY ACTIVITIES - NEW DEVELOPMENTS

Further to the note on case law on this question in Nuclear Law Bulletin No. 28, the following developments should be noted

In Pacific Gas and Electric Company v. State Energy Conservation and Development Commission, 659 Fed. 2nd 903 (9th Cir. 1981), the United States Supreme Court will consider whether the justiciable sections of the California statute are unconstitutional.

In General Electric Co. v. Fahner, 683 Fed. 2nd 206 (7th Cir. 1982), the United States Court of Appeals for the Seventh Circuit upheld the District Court decision that the Illinois Spent Fuel Act was unconstitutional. A petition to the Supreme Court to hear the case was filed on 12th October 1982.

In Washington State Building and Construction Trades Council v. Spellman, 684 Fed 2nd 627 (9th Cir. 1982) the United States Court of Appeals for the Ninth Circuit upheld the decision of the District Court that the State of Washington statute concerning the storage and transportation of radioactive waste is unconstitutional.

INTERNATIONAL ORGANISATIONS AND AGREEMENTS

INTERNATIONAL ORGANISATIONS

• *The OECD Nuclear Energy Agency*

REVISION OF THE PARIS CONVENTION ON THIRD PARTY LIABILITY IN THE FIELD OF NUCLEAR ENERGY AND OF THE BRUSSELS SUPPLEMENTARY CONVENTION

The possiblity of revising the 1960 Convention on Third Party Liability in the Field of Nuclear Energy (Paris Convention) and the 1963 Brussels Supplementary Convention was first considered in the early seventies, the reason being that the Paris Convention provides that a revision should be considered after a period of five years from its entry into force, which came about in April 1968. At the time, the NEA Group of Governmental Experts on Third Party Liability in the Field of Nuclear Energy came to the conclusion that there was no need to revise the Convention but asked the NEA Secretariat to follow closely any developments in the situation and report to the Group if reconsideration of this decision appeared necessary In 1976, in view of the uncertainties resulting from the monetary crisis and continuing inflation affecting the conditions of application of the Paris Convention and the Brussels Supplementary Convention, the Group of Governmental Experts studied this question again, and this time came to the conclusion that the Conventions should be amended with regard to two main points which were urgent and of considerable practical importance: replacement of the unit of account used in the Conventions, and reconstitution of the amounts of compensation for victims of nuclear incidents. In addition, a number of minor modifications were made to the texts of both Conventions to take account of experience gained from their practical application. These various amendments were approved, in the framework of NEA, by the Steering Committee for Nuclear Energy before being submitted to the OECD Council; they have already been discussed in Nuclear Law Bulletin No. 24 and the information provided still stands

The Protocols to amend respectively the Paris Convention and the Brussels Supplementary Convention were opened for signature on 16th November 1982 and will remain open for a period of three months. On the same day, the OECD Council also adopted two Recommendations concerning application of

the Conventions The first Recommendation invites the Contracting Parties to the Paris Convention which have established a lower amount of liability for certain categories of nuclear operator in their national legislation to take steps to ensure that the total amount of funds available for compensation of nuclear damage is unaffected. The second Recommendation, which is immediately applicable, asks the Contracting Parties not to await the entry into force of the new Protocols before changing the unit of account of the Conventions

STATEMENTS ON THE INTERPRETATION AND APPLICATION OF THE RECOMMENDATIONS OF THE ICRP (1982)

The NEA Committee on Radiation Protection and Public Health submitted two draft statements to the OECD Steering Committee for Nuclear Energy, in the framework of its activities in the area of interpretation of the recommendations of the International Commission on Radiological Protection (ICRP) and their application to practical situations, the purpose of this measure is to support national authorities' efforts to translate these recommendations into national standards and regulations. These statements concern certain aspects of interpretation, practical application or introduction into national legislation of the basic principles of the System of Dose Limitation recommended by the ICRP in its publication No. 26 of 1977

At its meeting on 27th/28th April 1982 the Steering Committee approved the statements submitted, recommended their transmission to national authorities and agreed that they should be published for the benefit of the international community of radiological protection experts The statements are reproduced below

Statement on the applicability of the principle of justification of a practice to radiological protection standards

Decisions about the justification of a practice or activity involving radiation exposure usually involve a broad range of social, economical and political issues in addition to those concerning radiological protection. As such, the justification requirement is usually embodied in national laws or in regulations issued by national authorities to implement this legislation.

While the principle of justification in theory applies at all levels of decision-making in matters involving radiation exposure, in practice it has limited, if any, utility in radiological protection standards applicable to activities authorised by national authorities. In particular, it is difficult to include clear and specific instructions for justification of practices in radiological protection standards to be applied at the operational level Such instructions would be almost impossible to inspect for compliance without extensive record keeping. The analysis and record-keeping required to show such compliance are probably not cost-effective in terms of the resulting improvement of radiological protection in a system that already applies the principles of optimisation of protection and of limitation of individual doses

Therefore, it is suggested that specific requirements for justification are not included in national radiological protection standards applied to operations Rather, it should be noted in the preface to natio-

nal standards that the justification of practices is the first stage of the system of dose limitation which should be kept in mind in operational decisions.

Statement on the applicability of the ICRP principle of limitation of individual doses to the lifetime dose to workers

The Committee on Radiation Protection and Public Health has been informed that paragraphs 99 - 102 of ICRP Publication 26 are being interpreted in some countries as a recommendation to limit the average annual dose equivalent, over a working lifetime, to less than 5 mSv* The Committee is aware that this was not the intention of ICRP, nor was it the intention of ICRP to recommend any lifetime dose limit that might be inferred from this interpretation. It is also to be noted that the Revised Radiation Protection Norms recently adopted by NEA do not require a lifetime dose limit for workers.

There are other considerations that indicate the need for caution in any proposal to introduce lifetime dose limits in national radiological protection standards. One example is the interference of such limits with the rights of an individual to follow the career of his choice

ICRP is currently considering this question as part of its ongoing review of the application of its system of dose limitations

• *International Atomic Energy Agency*

REVISED CODE OF PRACTICE ON RADIATION PROTECTION IN MINING AND MILLING OF RADIOACTIVE ORES

A Code of Practice on Radiation Protection in the Mining and Milling of Radioactive Ores, jointly prepared by the International Labour Office (ILO) and the IAEA in 1965, was published by the two organisations jointly in 1968. The Code was published by ILO as Part VI of its Manual of Industrial Radiation Protection and by the Agency as IAEA Safety Series No. 26.

Since then, there have been significant developments in the concepts and principles of radiation protection as reflected in the recommendations made by the International Commission on Radiological Protection (ICRP) in its publications Nos. 24, 26 and 32. There have also been significant developments in the techniques and methods of measuring radon, thoron and their daughter products. In the light of these developments, the

* mSv. milli-Sievert.

IAEA, the ILO and the World Health Organisation (WHO) convened an advisory group in 1978 to revise the Code of Practice and its Technical Addendum. The OECD Nuclear Energy Agency (NEA), ICRP and the United Nations Scientific Committee on the Effects of Ionizing Radiation also participated in the work of the advisory group.

A first revised version was circulated to all Member States of the IAEA and ILO, to WHO Regional Centres and some other international organisations for comments. The comments received were reflected in a final text completed in December 1981 by an IAEA-ILO-WHO group of consultants in which the NEA was also represented

The Code of Practice as thus revised was approved by the IAEA Board of Governors on 18th September 1982 as part of the IAEA Safety Standards, with a recommendation to all Member States that they take it into account as far as practicable, in the formulation of national regulations or in carrying out other regulatory actions.

The revised Code of Practice will be jointly issued by the three co-sponsoring organisations

MUTUAL ASSISTANCE IN NUCLEAR EMERGENCIES

In February 1982, the Board of Governors requested the Director-General to convene a group of experts to study the most appropriate means of responding to the need for mutual assistance in connection with nuclear accidents and of facilitating appropriate international co-operation in the area of nuclear safety. The Group of Experts was convened by the IAEA in Vienna from 28th June to 2nd July 1982, with the participation of experts from 31 Member States and observers from the United Nations Office of the Disaster Relief Co-ordinator (UNDRO) and the European Atomic Energy Community (EURATOM).

In its report, the Group of Experts acknowledges the need for prior arrangements to facilitate mutual emergency assistance, stresses the necessity of an integrated approach by both potential requesting and assisting parties, and identifies advance emergency planning requirements, including special planning considerations with regard to nuclear power plants located in border areas. Emphasis is laid on the IAEA's assistance and advisory roles in planning, arranging for and evaluating emergency response exercises, in the development of bilateral or multilateral arrangements between Member States for mutual emergency assistance, in establishing and maintaining an inventory of such arrangements with updated information, and in developing guidance for use by Member States in integrating potential external assistance into national emergency preparedness planning.

With regard to legal constraints which could impede the provision of external assistance to a country faced with a nuclear emergency, the Group of Experts recommends that the IAEA develop an advisory document, for issue in the series of Information Circulars (INFCIRC), containing a comprehensive set of provisions that could serve as guidelines for the negotiation of bilateral or multilateral agreements and could readily be agreed to by a requesting and an assisting State at the time of a nuclear emergency. The Group of Experts recognises the value of such a document in overcoming in advance the potential legal impediments to external nuclear emergency assistance. In the view of the Group of Experts, the availability of this document could facilitate consideration, at a later stage, of the appropriateness of negotiating a multilateral agreement or convention on mutual emergency assistance

The Group of Experts further recommends that in cases where a nuclear accident in one country might have a significant radiological impact in other countries, i.e. where a nuclear power plant is located in a border area, special planning considerations cover issues such as establishing a threshold of reportable events, integrated planning and prior arrangements for information exchange between the States concerned, and that the IAEA consider establishing an expert group to advise it on these issues

On 18th September 1982, the Board of Governors took note of the Expert Group's report and authorized the Director-General to start implementing the Expert Group's recommendations in 1983 within the limits of the funds available As a first step in the implementation of these recommendations, the IAEA will convene in April 1983 another expert group to consider the development of a document setting out provisions that could facilitate the negotiation of bilateral or regional arrangements for mutual emergency assistance in the event of a nuclear accident and that could be readily agreed upon between a requesting and an assisting State at the time of a nuclear emergency.

STUDY ON INTERNATIONAL SPENT FUEL MANAGEMENT

An IAEA group of experts has recently completed a major study on *the interim storage of spent fuel from nuclear reactors. The study on* International Spent Fuel Management was begun in 1979 on the initiative of the IAEA. The Group was asked to examine the potential for international co-operation in the management of spent fuel and to assist the IAEA in defining what role it might play in solving problems created by growing accumulations of spent fuel. Experts from 24 countries and three international organisations took part in the study.

Data on spent fuel arisings and storage capacities were collected by the experts They show that by the year 2000 approximately 200,000 metric tons of spent fuel will have been generated worldwide. Prior to 1990 there is reasonably good assurance that adequate provision to deal with this spent fuel by either interim storage or reprocessing will exist, but provision for some spent fuel beyond 1990 either has not yet been made or is only in the early planning stages.

At present water basins are the method most used worldwide for *the storage of spent fuel This is a safe and well-proven technology* As an alternative, various dry storage methods are being investigated and planned in several countries Some dry storage concepts appear to offer cost savings compared with water basin storage, but no single concept was found to be optimum over the range of facility sizes and licensing conditions studied.

The study concludes from an examination of prior bilateral and multilateral undertakings in the nuclear field that similar arrangements would be feasible for spent fuel management. A number of incentives which might move countries to engage in co-operative spent fuel storage have been identified; these include cost savings from the construction of large storage facilities and optimum usage of existing storage capacity The study recognises, however, that finding a country which would act as a host for a multinational storage facility could present a problem.

The experts found that spent fuel management is of great importance and that work *on international co-operation in this field should continue* The experts identified a number of activities in the areas of technical assistance, technical information exchange, and guidelines and standards which could appropriately be undertaken by the IAEA

The study lays the foundation for interested parties to transform the conceptual work done by the experts into practical arrangements for co-operative storage of spent fuel.

The Final Report of the Expert Group on International Spent Fuel Management has been reproduced as document IAEA-ISFM/EG/26 (Rev. 1).

ADVISORY SERVICES IN NUCLEAR LEGISLATION

In follow-up to the advisory services provided by the IAEA to the Chilean Nuclear Energy Commission in 1981 and which resulted in a bill on nuclear safety and radiation protection, expected to be enacted next year, further advisory services were provided in October 1982 under the IAEA Technical Co-operation Programme for the preparation of draft regulations for licensing purposes and for the physical protection of nuclear materials and installations. Both sets of draft regulations are based on the relevant IAEA safety standards, codes of practice, safety guides and other recommendations.

Advisory services were also provided in October 1982 to the National Atomic Energy Commission of Uruguay in the elaboration of nuclear legislation and in related organisational and regulatory matters.

AGREEMENTS

• *France-Egypt*

1981 AGREEMENT ON CO-OPERATION IN THE PEACEFUL USES OF NUCLEAR ENERGY

By Decree No. 82-430 of 19th May 1982 France published an Agreement with Egypt for co-operation in the peaceful uses of nuclear energy, signed in Paris on 27th March 1981 (Official Gazette of 26th May 1982).

The purpose of the Agreement is in particular to facilitate the contribution by the French authorities concerned and French industry to the Egyptian nuclear power programme.

To this effect, the Agreement provides for the conclusion of specific agreements between the competent public bodies of both Contracting Parties, the conclusion of contracts concerning nuclear energy, industrial achievements and supply of nuclear materials, equipment, facilities as well as technological information.

Both Parties undertake that all nuclear materials and equipment transferred under the Agreement will be used solely for peaceful purposes and submitted to IAEA Safeguards. In Egypt, this control will be exercised in accordance with an agreement to be concluded between Egypt and the IAEA under the Non-Proliferation Treaty; and in France in accordance with an agreement of 1978 concluded by the latter country with the European Atomic Energy Community and the IAEA relating to the application of safeguards in France

The Agreement will remain in force for thirty years from the date of its ratification by both Parties.

• *France-Republic of Korea*

1981 AGREEMENT ON CO-OPERATION IN THE PEACEFUL USES OF NUCLEAR ENERGY

An Agreement for co-operation in the peaceful uses of nuclear energy, signed on 4th August 1981 between France and the Republic of Korea was published in the French Official Gazette of 2nd June 1982.

Under the Agreement, both Parties undertake to develop and strengthen their co-operation in the fields of research and development as well as industrial applications of nuclear energy.

The Agreement provides for the conclusion of specific agreements, between the competent public authorities of both countries or bodies designated by them, concerning industrial achievements as well as supply of nuclear materials, equipment and technological information

• *Japan-Australia*

REVISED AGREEMENT ON CO-OPERATION IN THE PEACEFUL USES OF NUCLEAR ENERGY (1982)

In 1972, Japan and Australia concluded an Agreement for co-operation in the Peaceful Uses of Nuclear Energy. However, in view of increasing concern over non-proliferation issues, both countries negotiated a revision of the Agreement, which strengthens control measures and provides for consultation procedures to this effect.

The revised Agreement was signed on 5th March 1982 and applies to nuclear material and equipment transferred between both countries, not only directly, but also through a third country. As regards the material supplied by Australia to Japan, the Agreement provides for control on reproces-

sing operations, prior consultation on enrichment beyond 20%, application of safeguards under the Non-Proliferation Treaty (in cases where NPT safeguards cannot be applied, the IAEA Safeguards are applicable), and finally, for physical protection measures in line with the London Club Guidelines.

The 1972 Agreement will be terminated on entry into force of the present Agreement.

• *Portugal*

Portugal has recently concluded with Belgium, France and Spain agreements on scientific and technical co-operation in the peaceful applications of nuclear energy. The main points of the agreements with the different countries are highlighted below.

SCIENTIFIC CO-OPERATION AGREEMENT WITH BELGIUM ON A RESEARCH AND SURVEILLANCE PROGRAMME ON THE RADIOACTIVE WASTE DUMPING SITE IN THE NORTH-EAST ATLANTIC (1981)

An Agreement on the above programme was signed on 9th December 1981 between the Belgian Nuclear Research Centre (CEN) and the Portuguese Laboratory of Industrial Engineering and Technology (LNETI).

The purpose of the Agreement is to study the critical transfer pathways which would lead to radiation exposures to man from radioactive waste dumping in the North-East Atlantic.

The Agreement became operational on the date of its signature by both Parties and will remain in force for three years

AGREEMENT WITH FRANCE ON SCIENTIFIC AND TECHNICAL CO-OPERATION IN THE PEACEFUL USES OF NUCLEAR ENERGY (1980)

An Agreement on scientific and technical co-operation in the nuclear field was signed on 27th November 1980 between the French Atomic Energy Commission (CEA) and the Portuguese National Laboratory of Industrial Engineering and Technology (LNETI).

The Agreement covers, *inter alia*, research in the safety of nuclear installations and radiation protection; radioisotope applications, radioecology; environmental studies and the impact of nuclear energy on the environment. It is provided that, where necessary, agreements specific to the subject area concerned will be concluded between the interested parties.

The LNETI undertakes that all nuclear equipment and materials supplied under the Agreement will be used solely for peaceful and non-explosive purposes and will be submitted to IAEA Safeguards.

The Agreement, which became operational on the date of its signature by both Parties will remain in force for ten years.

A Protocol, signed on 27th November 1980 under the Agreement, defines the general conditions for scientific and technical co-operation between the CEA and the LNETI.

PROTOCOL WITH SPAIN ON SUPPLY AND TRANSFER OF URANIUM EXTRACTION TECHNOLOGY (1982)

A Protocol on the supply and transfer of technology on uranium extraction from phosphoric acid was signed on 17th March 1982 between the Spanish Junta de Energia Nuclear (JEN) and the Portuguese National Laboratory of Industrial Engineering and Technology (LNETI), in the framework of the Agreement of 14th January 1971 between Spain and Portugal for co-operation in the peaceful uses of nuclear energy (see Nuclear Law Bulletin No. 8).

It is provided that the JEN and the LNETI will promote the application of their respective technologies in the field in Portugal as well as that of technology jointly developed on such extraction.

The Protocol, which became operational on its date of signature will remain in force for five years.

• *United States*

DOE CO-OPERATIVE RESEARCH AND DEVELOPMENT AGREEMENTS IN THE NUCLEAR FIELD (1982)

The United States Department of Energy (DOE) concluded several co-operative research and development agreements in the nuclear field in 1982. The main points of the agreements, respectively concluded with the Commission of the European Communities (CEC), Atomic Energy of Canada Ltd (AECL) and the Japan Power Reactor and Nuclear Fuel Development Corporation (PNC) are summarized below.

DOE - CEC Agreement in the field of nuclear materials safeguards

The above technical Agreement, signed in January 1982, covers, *inter alia*, the following areas in which co-operation may be undertaken, development and testing of destructive and non-destructive assay methods and instrumentation, preparation and certification of reference materials for assay of fissile materials, containment and surveillance methods and equipment; nuclear materials accounting data evaluation and finally, exchange of information, equipment and staff.

DOE - CEC Memorandum of Understanding in the field of radioactive waste management

This Memorandum of Understanding, signed in October 1982, provides for co-operation and exchange of information in the field of radioactive waste management The areas covered include characterization of waste forms and disposal in geologic formations.

DOE - AECL Agreement in the field of radioactive waste management

The above Agreement concluded between DOE and Atomic Energy of Canada Ltd. (AECL) in August 1982 covers co-operation in a number of radioactive waste management areas, in particular, preparation and packaging of radioactive waste, decontamination and decommissioning, storage, characterization of and disposal in geologic formations, environmental and safety considerations as well as public acceptance issues.

DOE - PNC Agreement in the field of Liquid Metal Fast Breeder Reactors (LMFBR)

The above Agreement concluded on 10th February 1982 between DOE and the Japan Power Reactor and Nuclear Fuel Development Corporation (PNC) provides for the joint development and validation of a safety analysis computer code by the exchange of safety programme information and the application of experimental data generated through in-pile and out-of-pile measurements.

• *Euratom-Australia*

1981 AGREEMENT ON NUCLEAR MATERIALS

An Agreement was concluded on 17th September 1981 between the Government of Australia and the European Atomic Energy Community concerning the transfer of nuclear materials by Australia to the latter

The Agreement fixes the conditions to be met for such transfers; they concern, in particular, the prohibition to use these materials for explosive or military purposes, implementation of a safeguards system applied to this effect by EURATOM and the IAEA, in accordance with the EURATOM Treaty and the three Safeguards Agreements concluded between EURATOM, the Member States and IAEA.

Other provisions in the Agreement concern physical protection measures and the conditions for reprocessing and re-transfer of nuclear materials to third countries. The Agreement further provides for consultation procedures regarding high-level enrichment

The Agreement will remain in force for thirty years. It ensures a diversified source of suppliers of nuclear materials for the Community and constitutes a significant step in the development of relations between the latter and Australia.

• *International Atomic Energy Agency*

SAFEGUARDS AGREEMENTS

In June 1982 the Board of Governors approved the text of an agreement between Argentina and the IAEA for the application of safeguards to supplies of nuclear material from the Union of Soviet Socialist Republics, including an initial supply of 100 kilograms of 20% enriched uranium. The Agreement was signed and entered into force on 8th July 1982

On 22nd September 1982, an agreement for the application of safeguards to nuclear material supplied by the United Kingdom to Chile was signed between the IAEA and Chile. The Agreement, which had been approved by the Board of Governors at its September session, entered into force on the date of its signature. The fuel elements to be supplied by the United Kingdom and containing 45% enriched uranium will be used for the continued operation of the Chilean research reactor at La Reina, Santiago, by the Chilean Nuclear Energy Commission.

MULTILATERAL AGREEMENTS

• *Italy*

CONVENTION ON THE PHYSICAL PROTECTION OF NUCLEAR MATERIAL

By Act No. 704 of 7th August 1982 (published in the Supplement to Official Gazette No. 277 of 7th October 1982) Italy ratified the Convention on the Physical Protection of Nuclear Material of 3rd March 1980 (see Nuclear Law Bulletin Nos. 26, 27 and 28).

TEXTS

• *Federal Republic of Germany*

ORDINANCE OF 28TH APRIL 1982 ON ADVANCE FINANCIAL CONTRIBUTIONS TOWARDS THE CONSTRUCTION OF FEDERAL INSTALLATIONS FOR THE SAFE CONTAINMENT AND DISPOSAL OF RADIOACTIVE WASTE*

According to Section 21b, subsection 3, in conjunction with Section 54 of the Atomic Energy Act as revised on 31st October 1976 (BGBl.I p. 3053), Section 21b, subsection 3 having been inserted by Act of 20th August 1980 (BGBl. I p 1556) and Section 54 having been amended by the same Act, the Federal Government, with the consent of the Federal Council, hereby decrees as follows

SECTION 1

Levying of advance contributions

In order to cover the required costs for federal installations under Section 9a, subsection 3 of the Atomic Energy Act, the Federal Institute for Physics and Technology shall levy, according to this Ordinance, advance payments on the contributions to be paid according to Section 21b of the Atomic Energy Act.

SECTION 2

Persons liable to pay

(1) Advance payments shall be levied from any person who

1. has been granted a licence under Sections 6, 7, or 9 of the Atomic Energy Act or Section 3 of the Radiation Protection Ordinance, or

2. has applied for a licence under Section 7 of the Atomic Energy Act for an installation for the reprocessing of irradiated fuels,

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* *Unofficial translation communicated to the Secretariat.*

if it is to be expected that the activity to be licensed or the operation of the installation will lead to an obligation to transfer radioactive waste to federal installations under Section 9a, subsection 3 of the Atomic Energy Act.

(2) Licences according to Section 3 of the Radiation Protection Ordinance shall not be taken into account, if other radioactive substances are handled in connection with an activity for which a licence has been issued under the Atomic Energy Act according to subsection 1, No 1 above

(3) No contributions shall be requested from the collecting points of the Länder.

(4) Levying of advance payments may be dispensed with if the activity subject to a licence or the operation of the installation generates only small amounts of radioactive waste with a low specific activity

SECTION 3

Nature and extent of expenditure

Advance payments may be levied if necessary expenditure has been incurred for

1. research and development in connection with the installation,
2. acquisition of immovable property and rights,
3. planning,
4. construction, extension and renewal

SECTION 4

Calculation of expenditure

(1) The necessary expenditure shall be calculated according to real costs.

(2) Before the beginning of each calendar year, the works foreseen for such calendar year must be published and a cost estimate established

(3) The total necessary expenditure shall be determined following each calendar year.

SECTION 5

Notice of advance payments

(1) Advance payments shall be levied by notice

(2) The notice shall justify the total necessary expenditure for the period covered by such notice. Expenditure shall be broken down according to the measures taken and the method shall be given for calculating the contribution of the person liable to pay according to Section 6

(3) If it is to be expected that there will be a considerable change in expenditure during the following period, the notice shall contain an indication to that effect

SECTION 6

Apportionment of expenditure

(1) The necessary expenditure shall be apportioned as follows.

1 75.5% shall be attributed to persons liable to pay who have been granted a licence according to Section 7 of the Atomic Energy Act for an installation for the reprocessing of irradiated fuel with a capacity of more than 50 tonnes/year or who have applied for such a licence;

2 4% shall be attributed to persons liable to pay who have been granted a licence according to Section 7 of the Atomic Energy Act for an installation for the reprocessing of irradiated fuels with a capacity of up to 50 tonnes/year,

3. 17 5% shall be attributed to persons liable to pay who have been granted a licence according to Section 7 of the Atomic Energy Act for an installation for the fission of nuclear fuel with an electrical capacity of more than 200 Megawatts;

4. 3% shall be attributed to persons liable to pay who have been granted another licence according to Section 7 of the Atomic Energy Act, a licence according to Sections 6 or 9 of the Atomic Energy Act or according to Section 3 of the Radiation Protection Ordinance.

(2) Before the apportionment under subsection 1 above, the necessary expenditure shall be reduced by the sum of the costs and fees levied during the year in question by the collecting points of the Lander for disposal and transferred to the Federal Institute for Physics and Technology, to the extent that such costs and fees are destined to cover expenditure according to Section 3 above.

(3) Expenditure shall be apportioned among persons liable to pay under subsection 1, Nos. 1 to 3 according to the capacity of each installation Expenditure shall be apportioned among persons liable to pay under subsection 1 No. 4 according to the average amount of radioactive waste to be transferred to federal installations under Section 9a, subsection 3 of the Atomic Energy Act and generated in the last three years prior to levying the advance payments.

(4) In the case where federal installations under Section 9a, subsection 3 of the Atomic Energy Act are established exclusively for radioactive waste coming from certain persons liable to pay, expenditure shall be apportioned solely among those persons. This shall be apportioned according to the amounts of radioactive waste attributable to each such person if such amounts are fixed at the time of levying the advance payment, on other cases subsection 3 shall apply.

SECTION 7

Due date of advance payments

Advance payment shall be due one month after receipt of the notice of advance payment unless instalments have been fixed.

SECTION 8

Reimbursement of advance payments

Advance payments shall be reimbursed if the conditions required for their levying according to Section 2, subsection 1 become inapplicable later. Upon reimbursement the advance payments shall bear an interest of 2% above the discount rate of the Federal Bank.

SECTION 9

Crediting of advance payments

Advance payments levied according to this Ordinance shall be credited to the contributions and advance payments to be levied according to a final regulation pursuant to Section 21b of the Atomic Energy Act In so doing advance payments shall bear an interest of 2% above the discount rate of the Federal Bank.

SECTION 10

Advance payments for expenditure incurred
before the entry into force of this Ordinance

Advance payments shall be levied for the necessary expenditure incurred as from 1st January 1977. The total expenditure covering the period before the entry into force of this Ordinance shall be determined according to Section 4, and two-thirds thereof shall be levied after the entry into force of this Ordinance. One-third of this expenditure shall be levied together with the first levying of advance payments for the expenditure incurred after the entry into force of this Ordinance

SECTION 11

Berlin clause

This Ordinance shall also apply to the Land Berlin in accordance with Section 14 of the Third Transition Act in conjunction with Section 58 of the Atomic Energy Act.

SECTION 12

Entry into force

(1) This Ordinance shall come into force on the day after its publication

(2) Section 7, subsection 2 of the Cost Ordinance of 17th December 1981 made under the Atomic Energy Act (BGBl. I p. 1457) shall come into force at the same time.

(3) This Ordinance shall cease to have effect on 31st December 1986 at the latest.

• *Sweden*

ORDINANCE OF 18TH JUNE 1981 ON FINANCING OF FUTURE EXPENDITURE FOR SPENT NUCLEAR FUEL ETC. (SFS 1981.671)*

SECTION 1

The National Board for Spent Nuclear Fuel settles questions and otherwise performs the functions set forth in Sections 4, 7 nd 10 of the Act (1981:669) on financing of future expenditure for spent nuclear fuel etc.

SECTION 2

The programme referred to in the first paragraph of Section 3 of the Act on financing of future expenditure for spent nuclear fuel etc. shall be submitted to the National Board for Spent Nuclear Fuel no later than the month of June of each year.

SECTION 3

The programme of activities referred to in Section 4 of the Act on financing of future expenditure for spent nuclear fuel etc. shall

1 contain an outline of the complementary research and development activities that may be necessary as well as an account of the measures that have to be taken in this respect within a period of at least five years,

* Unofficial translation by the Swedish authorities.

2. contain an outline of whatever measures may be required for surveillance and inspection of final repositories,

3. describe the measures that, beyond those stipulated by the programme referred to in Section 2, have to be taken for the handling and final storage of spent nuclear fuel and radioactive waste deriving from such fuel and for the safe decommissioning and dismantling of the reactor installations.

The programme shall be prepared by no later than the end of October. The programme shall be sent to the reactor owners or to an agent of the reactor owners.

SECTION 4

The National Board of Spent Nuclear Fuel shall, by no later than the end of October, submit to the Government the programme referred to in Sections 2 and 3, along with its own recommendation for fees for the following calendar year.

SECTION 5

The fee referred to in Section 5 of the Act on financing of future expenditure for spent nuclear fuel etc. shall be paid quarterly, no later than one month after the end of each quarter.

SECTION 6

Loans may be granted to a reactor owner up to an amount corresponding on each occasion to no more than 75% of the sum of the fees that have been remitted by the reactor owner, less what can be assumed will be used during the loan period.

SECTION 7

The National Board for Spent Nuclear Fuel is empowered to decide how and to what extent remitted fees may be used to pay the costs of a reactor owner during a certain future period of time for measures included in the basis for determining the fee.

SECTION 8

Remitted fees shall be disbursed in advance for the calendar quarter to cover the costs of measures for which payment falls due or is expected to fall due during the quarter. Disbursements shall only be made for costs of measures referred to in Section 1 of the Act on financing of future expenditure for spent nuclear fuel etc. and included in the basis for determining the fee.

SECTION 9

Decisions taken by the National Board for Spent Nuclear Fuel under the provisions of the Act on financing of future expenditure for spent nuclear fuel etc may be appealed to the Government through due appeals procedure.

This Ordinance shall enter into effect on 1st July 1981.

STUDIES AND ARTICLES

ARTICLES

THE LEGAL FORCE OF INTERNATIONAL RULES RELATING TO NUCLEAR RISKS*

A. HERRERO DE LA FUENTE
Professor of International Law,
University of Valladolid, Spain

I. INTRODUCTION

The international significance of nuclear power has revealed that international co-operation has a vital part to play in this field, not only because of the considerable economic resources required for its use but also the risks entailed - "an accident anywhere is an accident everywhere". In fact co-operation began right from the start, especially in some areas such as nuclear third party liability. International treaties have been in existence for more than 20 years but fortunately, have not yet had to be applied (1).

Generally speaking, international law was brought in very early on, both for promoting the use of nuclear energy and for protecting us against the risks entailed. Nevertheless, it has rightly been said that although international sources play an important role in the law regulating nuclear activities, the legal links between the rules framed by the international community and national laws or regulations are undoubtedly tenuous for the most part, and even non-existent (2).

This is why it is necessary to establish to what extent international rules concerning the use of nuclear energy for peaceful purposes are binding, or, more generally, what is their legal status.

Because this is an extensive topic, due to the large number of sectors covered, we shall merely consider the reduction of nuclear risks, in other words the safety of nuclear installations, the transport of radioactive material, waste disposal etc. We shall therefore disregard other areas of international nuclear law such as international third party lia-

* The ideas expressed, and the facts given in this article are under the sole responsibility of the author.

bility or safeguards to prevent nuclear energy from being used for non-peaceful purposes. This is justified on two grounds: these topics have already been extensively studied and they also generally appear in international treaties, so that their legal status does not raise any special difficulty in such a well-known field.

International regulation of nuclear risks, on the other hand, stems not only from bilateral or multilateral co-operation between States in international treaties but also, and more importantly, from the work of international organisations.

A. The various stages in international regulation

If we refer back to the years following World War II, when nuclear energy first started to be developed, it is clear that after an initial attempt at centralisation, there was a rapid swing to the other extreme, namely bilateral consultation between States. The first attempt to place nuclear energy on an international footing was made in 1946 At the first session of the United Nations Atomic Energy Commission, the United States delegate proposed a plan to establish a global system for controlling both civil and military nuclear activities. In order to achieve this it was necessary to establish an Authority with considerable powers, a sort of world government for atomic energy (3).

This proposal was made during what has been called the first stage in the development of international co-operation in the nuclear field (4), when the major powers tried to monopolise all existing information on nuclear energy and its use. This lasted until 1953 when President Eisenhower made his famous "Atoms for Peace" speech.

The second stage lasted only three or four years. After the initial centralisation attempts, there followed a period of decentralisation, international consultation took the form of international treaties, mostly bilateral and usually drawn up between the United States and other countries wishing to enter the field. However the actual extent of international co-operation during this stage should be viewed realistically since many of the agreements concluded were no other than supply contracts with the United States. True international co-operation only began to appear in treaties between the United States and other countries that had already reached an advanced level of development in this sector, such as the United Kingdom or Canada (5).

The third stage featured the consolidation of international co-operation, one of its first achievements or, to be more precise, its starting point, being the establishment of the International Atomic Energy Agency (IAEA) in 1956. This was promptly followed by the establishment of the European Atomic Energy Community and the European Nuclear Energy Agency in 1957.

Thus began a period extending to the present day, in which international consultation became institutionalised, without bilateral procedures being abandoned however. A glance at the Nuclear Law Bulletin published by the OECD Nuclear Energy Agency (NEA) reveals the importance of this latter type of co-operation, which in many cases embraces the entire nuclear cycle and in some sectors, goes beyond the action taken by international organisations. Nevertheless, for the reasons already stated, we shall not be dealing with international regulation under international treaties, regardless of whether or not they were negotiated within an international organisation. We shall chiefly consider international rules

deriving from international organisations in the form of decisions, the force of which will depend on the instruments setting such bodies up. These decisions often take the general form of recommendations, which as is well known, vary greatly in force.

B. Institutionalised co-operation

In this field many international organisations are dealing with the reduction of nuclear risks at both world and regional levels. At world level, the United Nations and various specialised agencies, such as WHO, ILO or FAO* , are active. The most important one, however, is the International Atomic Energy Agency (IAEA). It is under the aegis of the United Nations but has a different status to that of the specialised agencies.

At regional level, alongside bodies such as the Nordic Council, the Council of Mutual Economic Assistance and the Organisation of American States, which have all set up committees to deal with nuclear matters (6), the basic work is done by the OECD Nuclear Energy Agency (NEA) and the European Atomic Energy Community (Euratom). It is true to say that IAEA, NEA and Euratom are the three leading international organisations concerned with atomic energy (7).

C. Protection against nuclear risks

The activities of these organisations cover all aspects of protection against nuclear risks siting and licensing nuclear power plants, protection against ionizing radiation, transport and physical protection of radioactive material, waste disposal etc.

In the case of radiological protection, the IAEA in 1962 published its first "Basic Safety Standards for Radiation Protection" based on the recommendations made by the International Commission on Radiological Protection (ICRP). In 1958, the NEA set up a Health and Safety Committee and instructed it to draw up a few basic radiation protection norms. These were prepared after Euratom had been consulted (8), and adopted by the OECD Council in the form of a recommendation. The two organisations mentioned, along with WHO and ILO, are currently revising the basic norms taking the 1977 edition of the ICRP Recommendations into account.

In 1959, Euratom (9) published some radiation protection standards in the form of a Council Directive, which were subsequently revised on several occasions, taking into account not only the ICRP Recommendations but also advances made in research programmes and experiments in the Member States.

International transport of radioactive material has also been dealt with by the international organisations mentioned, especially IAEA,

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* Note by the Secretariat: WHO = World Health Organization; ILO = International Labour Office, FAO = Food and Agriculture Organization.

which at the request of ECOSOC* published Regulations for the Safe Transport of Radioactive Materials in 1961 (10). After approval by the Board of Governors, the Regulations became an integral part of the Safety Norms recommended by IAEA, which are mandatory for operations conducted by the Agency and by the States receiving IAEA aid. Owing to their high technical standard, they have been incorporated in various international agreements relating to the transport of dangerous goods (11)

As for the disposal of radioactive waste, the most important work has been carried out since 1965 by the NEA. This led to the creation of a Multilateral Consultation and Surveillance Mechanism for Sea Dumping of Radioactive Waste in 1977 (12), following a decision by the OECD Council. This Mechanism represents the highest level of international co-operation achieved on the subject.

II. LEGAL FORCE OF INTERNATIONAL RULES

Regulation by the international organisations referred to covers a broad field, depending above all on the organisation's objectives and powers and the legal status or degree of constraint of the instruments used.

A. Objectives

Although they have similar objectives, the three organisations dealing with nuclear energy have succeeded in co-ordinating their activities to prevent any undesirable duplication. Thus IAEA prefers to deal with the framing of protection and safety standards whereas NEA is more concerned with legal regulation and Euratom is chiefly concerned with the harmonization of its Members' national rules.

Article II of the IAEA Statute (13) determines the Agency's general objectives, including accelerating and enlarging atomic energy's contribution to peace and prosperity. However, Article III relates more specifically to the subject of concern to us. It entrusts the Agency with a normative safety function to protect health and reduce to a minimum hazards to persons and property due to the use of nuclear energy for peaceful purposes.

The objective of protection is not expressed in the NEA Statute in such clear and precise terms. Article 1 describes NEA's basic task taking due account of the public interest and mindful of the need to prevent the proliferation of nuclear explosive devices, the purpose of the Agency is to further the development of the production and uses of nuclear energy, including applications of ionizing radiations, for peaceful purposes by the participating countries, through co-operation between those countries and a harmonization of measures taken at the national level. Thus it is a matter of promoting the use of nuclear energy for peaceful purposes. Nevertheless, the Statute also refers to protection against nuclear risks. For example, Article 8 states that NEA is to contribute to

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* Note by the Secretariat: ECOSOC = United Nations Economic and Social Council

the promotion, by the responsible national authorities, of the protection of workers and the public against the hazards of ionizing radiations and of the preservation of the environment. It is also to contribute to the promotion of the safety of nuclear installations and materials by the responsible national authorities and to the dissemination of information which may be freely distributed on the peaceful uses of nuclear energy.

The Euratom Treaty refers to the prevention of risks in its Preamble. The Contracting Parties state that they are anxious to create the conditions of safety necessary to eliminate hazards to the life and health of the public. Article 1 states that Euratom's task shall be to contribute to the raising of the standard of living in the Member States and to the development of relations with other countries by creating the conditions necessary for the speedy establishment and growth of nuclear industries. Article 2 says that in order to perform its task Euratom shall, among other things, establish uniform safety standards to protect the health of workers and of the general public and ensure that they are applied.

The latter point is considerably expanded in Title II, Section IV of the Treaty under the heading "Health and Safety", which refers to the establishment of basic standards for protecting the health of workers and of the general public, the execution of particularly dangerous experiments, the disposal of radioactive waste and the monitoring of the level of radioactivity in the air, water and soil.

B. Powers

The IAEA system is relatively straightforward on the basis of the directives issued by the General Conference, the Board of Governors lays down the principles of the Agency's policy and ensures that the latter is followed. The Conference, however, does not have autonomous decision-making powers as it may merely accept or reject the Board's proposals as a whole.

Thus the IAEA has issued many Codes, Basic Norms, Manuals and so on in the form of recommendations whose influence lies in principle in the technical standard of the contents.

In order to meet the NEA's objectives, the NEA Steering Committee may give its advice, in particular in the form of recommendations, to participating countries on any question within its competence Nevertheless, any decisions which are binding on governments, apart from a few powers conferred on the Steering Committee, must be submitted in the form of proposals to the OECD Council. The Council is the OECD's governing body from which all the Organisation's acts derive, apart from a few exceptions. It stands at the top of a pyramid of subsidiary bodies whose main task consists in submitting agreements, decisions or recommendations in the form of drafts or proposals. The NEA has only limited powers delegated to it by the Council, chiefly to facilitate the Agency's own work setting up committees, preparing budget forecasts, determining how national programmes are to be submitted and examined etc. (15).

Nuclear safety standards, including those relating to radiation protection, framed by NEA have been presented to countries in the form of recommendations, sometimes in association with a Council Decision obliging Member countries to take effective measures in the field concerned. The Multilateral Consultation Surveillance Mechanism for the Sea Dumping of Radioactive Waste, on the contrary, is incorporated in a Council Decision.

The Euratom procedures for protection against nuclear risks are more complex. The basic standards for radiation protection relating to maximum permissible doses compatible with adequate safety, maximum permissible levels of exposure and contamination and the fundamental principles governing the health surveillance of workers are worked out by the Commission after it has obtained the opinion of a group of persons appointed by the Scientific and Technical Committee from among scientific experts in the Member States. The Commission obtains the opinion of the Economic and Social Committee on these basic standards. Finally, after consulting the Assembly, the Council, on a proposal from the Commission, which forwards to it the opinions obtained from these Committees, establishes the basic standards, acting by a qualified majority. The standards are revised according to the same procedure

The provisions applicable in this field in the Member States are harmonized through recommendations made by the Commission. The latter also makes recommendations to Member States with regard to the level of radioactivity in the air, water and soil. In cases of urgency, it may issue a directive requiring the Member State concerned to take, within a period laid down by the Commission, all necessary measures to prevent infringement of the basic standards and to ensure compliance with regulations Should the State in question fail to comply with the Commission's directive within the period laid down, the Commission or any Member State concerned may forthwith bring the matter before the Court of Justice.

Another point is that any Member State in whose territory particularly dangerous experiments are to take place must receive the assent of the Commission where the effects of such experiments are likely to affect the territories of other Member States.

The Commission's opinion is also required wherever a State decides on the disposal of radioactive waste in whatever form The State must provide the Commission with such general data relating to the disposal plan as will make it possible to determine whether the implementation of such plan is liable to result in the radioactive contamination of the water, soil or air space of another Member State.

The decision procedure has been used above all for drawing up research and education programmes but also for radioactive waste management or the creation of expert Working Parties for studying nuclear safety

Finally, the Council has adopted a number of Resolutions, one of the most important being that of 22nd July 1975. It concerns technological problems of nuclear safety and provides for the adoption of recommendations followed by decisions. It is addressed not only to States but also to the bodies handling such matters, constructors and enterprises operating nuclear power plants, and requires that the Commission should report each year on the results achieved.

In other fields connected with the use of nuclear energy for peaceful purposes, although not directly concerned with protection against risks, the European Atomic Energy Community has used other normative procedures. For examples, several Regulations have been adopted concerning supplies (16).

C. Legal effects

Like the international organisations referred to above, countries have themselves concluded many treaties to reduce nuclear risks (17). These are undoubtedly binding and for this reason we shall not mention them any further.

In principle, the Euratom rules contained in various types of instrument, the force of which is defined in the Treaty establishing the Community, are likewise binding. Article 161 lays down that the Council and the Commission shall make regulations, issue directives, take decisions, make recommendations or deliver opinions. The same Article states that a regulation is binding in its entirety and directly applicable in Member States. A directive is binding, as to the results to be achieved, upon each Member State to which it is addressed, but leaves to the national authorities the choice of form and methods. A decision is binding in its entirety upon those to whom it is addressed. Recommendations and opinions have no binding force.

To regulate the use of nuclear energy for peaceful purposes, Euratom has used all these instruments as well as others. It has used what have been called "atypical" or *sui generis* instruments (18) not provided for in Article 161. These are programmes, resolutions, declarations or communications. They undoubtedly do not provide any legal safeguards but nonetheless create the flexibility necessary for any agreement between Member States to be reached (19).

The communications of the Commission are of special importance in this connection. They are made pursuant to Article 41 *et seq.* of the Euratom Treaty. A few Council Resolutions, such as that of 22nd July 1975 or that of 18th February 1980 laying down a Community Plan of Action concerning Radioactive Waste Disposal, are also important.

Among the latter, as Teitgen has rightly done (20), a distinction should be made between decisions which are no other than declarations of intent and merely announce measures which can be effectively adopted only by following the procedures laid down in the Treaty, and those relating to matters that the Council may decide conclusively in the form of a deliberation, conclusion or resolution. The latter are legal acts subject to review and possible annulment. The former, however, do not affect the legal position and cannot be declared void by the Court pursuant to Article 146 of the Treaty Since they are merely proposals, if they are not implemented the responsibility of Euratom or its Member States is not called into question. This does not mean that they are totally devoid of legal force since they at least *contain policy commitments which must be executed in good faith. They oblige the Council and its members, when establishing the decisions proposed, not to challenge the agreements of principle therein. They have force of law if it is accepted that in the Communities, an unenforceable obligation may nonetheless be a legal one* (21).

In the case of the OECD Nuclear Energy Agency, apart from some decision-making powers enabling it to carry out any task delegated by the Council within the limits laid down by the Statute, the Steering Committee carries out its duties under the authority of the OECD Council. NEA therefore operates as a subsidiary body of the OECD and its task is to submit proposals. The OECD Council alone may take decisions in the broad sense of the term

According to Rule 18 of the Rules of Procedure, decisions of the Organisation include decisions on internal matters concerning the work in hand, recommendations submitted to the Member countries for implementation if they consider it opportune and decisions binding on the Members, which must implement them after they have complied with their appropriate constitutional procedures. The OECD may also conclude international agreements with Member or non-Member countries and international organisations

It has been observed that the obligations arising from OECD decisions are not easily enforceable since they usually do not involve any major or specific penality. Nevertheless the common interest now shared by Member countries produces a kind of political and moral constraint which undoubtedly acts as the primary sanction for Council decisions as it is even more effective than a legal obligation to fulfil commitments (22)

The OECD Council follows the standard practice of unanimous voting for decisions and recommendations. This strict rule however has been considerably eased: if a Member abstains from voting for a decision or recommendation, the abstention does not prevent the decision or recommendation concerned from being applicable to the other Members (23)

Thus it has been said that a decision by the OECD Council amounts to a simplified form of agreement between the Members who have voted in favour (24).

The question of the legal status of OECD recommendations leads us to the much broader topic of the validity of international recommendations, which also concerns IAEA, since apart from a few exceptions, the latter's standards are no more than recommendations (25).

In this connection, the oversimplified view that recommendations are of little use owing to the absence of constraint should be dismissed immediately. As rightly pointed out by Virally, the problem is not just that of choosing between the existence or absence of compulsion but a more general and complex one of the legal status of the invitation set out in the recommendation and its potential legal effects even in the absence of direct and immediate constraints. These legal effects are obvious inasmuch as a recommendation is or is not implemented for specific reasons States feel the need to justify a negative attitude towards a recommendation by using arguments other than its non-binding nature This need for justification is above all political. Any presumption that their attitude is unlawful has to be contested and this is precisely - as Virally points out - where politics and law meet (26).

Without attempting to be exhaustive, it should first be noted that the term "recommendation" covers very diverse situations, even disregarding the extreme example of the European Coal and Steel Community (ECSC) Recommendations.

Secondly, the legal status of a recommendation largely results from the actual link between its author and the parties to which it is addressed Finally the recommendation's effects will depend above all on factors somewhat external to the organisation such as the number and capacity of the countries which have voted in favour, or the fact the the recommendation is accompanied by mandatory ancillary elements to make it more effective or that its legal consequences derive from an instrument other than the treaty establishing the organisation which is making the recommendation (27).

In the case of the OECD, the 1960 Convention did not specify the legal consequences of Council Recommendations. According to the 1948 Con-

vention, which created the OEEC, recommendations were to be addressed only to States that were not members of the Organisation. The Rules of Procedure however introduced the possiblity of making recommendations to Member countries In the 1960 Convention, both decisions and recommendations are to be addressed to Members of the Organisation. They have nothing in common with mere requests to other governments or organisations The Rules of Procedure further lay down that recommendations shall be submitted to the Members for consideration in order that they may, if they consider it opportune, provide for their implementation.

Nevertheless, the legal status of these recommendations exceeds that of a mere invitation without any constraint, which could easily be overlooked by States, and flows from certain specific features of the OECD. By far the most important is that, in order to be adopted, a recommendation, and likewise a decision, requires a unanimous vote by the Member States. This indoubtedly gives it special status without necessarily implying that a State voting for an ordinary recommendation is legally obliged to implement it (28).

Secondly, the OECD often backs up its recommendations by procedures such as requiring Member countries to supply information on steps taken and results obtained or requesting them to explain why they have not implemented a recommendation. The OECD may even set up a subsidiary organ to follow up the recommendation by studying the difficulties encountered when implementing it and reporting back on the results. Sometimes a recommentation accompanies a Council decision imposing a general obligation to take action An example is the NEA Radiation Protection Norms which are set out in a recommendation linked to a Council Decision which simply obliged Member countries to take effective radiological protection measures without giving any further details

Most of the safety standards approved by IAEA are also contained in recommendations, whose effectiveness is often strengthened by different means so that although in principle they are not binding, in practice they often become so.

Most of the codes, safety guides, regulations etc. forming the NUSS Programme (Nuclear Safety Standards) have been approved by the Board of Governors and have been recommended to Member States although from the legal standpoint they do not constitute Conference recommendations in accordance with the Statute. Nevertheless, these recommendations are mandatory in regard to work carried out by the Agency and also for countries engaged on projects with nuclear plant, equipment and aid from the Agency In the latter case, in the event of violations provision has been made for aid to be withdrawn, for the State at fault to forfeit its membership rights and for it to be reported by the Agency to the United Nations (29). Other IAEA recommendations become binding by being incorporated in international treaties. Such is the case with the Regulations for the Safe Transport of Radioactive Materials (30) published in 1961 Because of their high technical value, these Regulations have been adopted in many transport agreements. the International Convention concerning the Carriage of Goods by Rail, the Agreement concerning the International Carriage of Dangerous Goods by Road, the Technical Instructions for the Safe Transport of Dangerous Goods by Air set out in Annex to the Chicago Convention etc (31).

Another approach, with similar effects but different from the legal standpoint, consists in the conclusion of international agreements imposing the obligation to adopt IAEA Recommendations The London Convention on the Prevention of Marine Pollution by Dumping of Wastes and other Matter, in force since 1975, makes the dumping of low-level radioactive

waste subject to the granting of a special permit issued beforehand by the competent national authorities, which must take IAEA Recommendations into account.

Finally, there is a third possiblity, also used in the London Convention. The latter bans the dumping of high-level radioactive materials and subjects that of medium or low-level materials to specific conditions. The Convention refers to the IAEA for the determination of the various types of radioactive substances. In other words, the London Convention includes what has been termed a rule of law in "blank" (32), whose content depends on an external element, namely the IAEA Recommendations. So far as it is concerned, the Agency is engaged in normative activity through recommendations which become mandatory as the content of treaty provisions.

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We have perhaps emphasised the search for an element of constraint in the decisions of the international organisations studied In principle, these decisions are not binding since they take the form of recommendations It might be thought that we are following those who consider that international law is all the more effective to the extent that its rules become constraining and who are concerned that most decisions of international organisations are "mere" recommendations devoid of any obligation.

To dispel such a conclusion, it should first be pointed out that with regard to protection against the risks of nuclear energy used for peaceful purposes, most international regulations do not require a formal legal support to make them binding. The use of nuclear energy has almost spontaneously led to international co-operation for a number of reasons already stated (33). What Kiss has called *the nature of things* (34) has obliged countries to lay down rules governing its use and for this purpose there is nothing more effective than the rules established by international organisations through recommendations, the chief force of which is their undisputed technical value.

Nevertheless, our second point is that international recommendations, which in principle do not have any binding force, are not devoid of legal effects, and, above all, have nowadays probably become the standard expression of international regulation, as they represent a tolerable form of pressure by the organisation on its members to achieve social objectives (35). Or as noted by Virally, *since international conditions do not allow for the exercise of authority, it was necessary to invent novel and sufficiently flexible legislative or paralegislative procedures to obtain the approval of the maximum number of countries* (36).

In addition, the fact that a country is a member of an organisation presupposes that it is willing to co-operate in theory at least by accepting its recommendations. In other words, belonging to an organisation tacitly implies the obligation to contribute in principle towards meeting the objectives laid down in the constitutive treaty (37) Judge Lauterpacht has even asserted with reference to certain United Nations recommendations that if a State persistently disregards the recommendations made by the organisation the belief will arise that it has become guilty

of disloyalty to the organisation's principles and that misuse of the right to ignore recommendations may entail legal sanction (38).

Finally, it is obvious that countries would often prefer the measures that they are prepared to apply to be presented in the form of a recommendation rather than a binding decision (39). Furthermore, a treaty which is mandatory in form may in terms of content involve no more than directives if the signatories have failed to establish precise and detailed rules reflecting clearly defined attitudes (40). In other words a rule which is obviously more constraining is not necessarily more effective.

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(4) G. Erler, "Die Rechtsentwicklung der internationalen Zusammenarbeiten im Atombereich Beitrage zum internationalen Wirtschaftsrecht und Atomenergierecht", Gottingen 1962, vol. I, Fasc 1 p. 6 *et seq*

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(13) Agreement adopted on 23rd October 1957 by the IAEA General Conference, on 14th November 1957 by the United Nations General Assembly

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(18) See J.V. Louis, "El ordenamiento jurídico comunitario", Comisión de las Comunidades europeas, Colección perspectivas europeas, Brussels 1980, p. 48 *et seq.* and M. Diez de Velasco, "Instituciones de Derecho international", vol. II, p. 342.

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(24) V.P. Freymond, "Les décisions de l'OECE" in Annuaire suisse de Droit international (ASDI) 1954, p. 56 *et seq.* In similar vein, J. Castaneda, "La valeur juridique des résolutions des Nations Unies" in RCADI No. 129 (1970 - I), pp. 302 - 307. On this point see also P. Strohl and P. Reyners, *loc cit.* p 11.

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(27) J. Castañeda, *loc. cit.* p 219.

(28) See F. Vallat, "The General Assembly and the Security Council of the United Nations" in British Yearbook of International Law (BYIL) 1952, p. 74.

(29) R.E. Charlier, "Questions juridiques soulevées par l'évolution de la science atomique", in RCADI No. 91 (1957 - I), p. 277.

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(37) See A. Malintoppi, "Le raccomandazioni internazionali", Milan 1958 p. 49 *et seq.*

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Le régime juridique de la politique électronucléaire de la France, Thesis by M. Patrick Baleynaud, University of Poitiers, France, June 1982, 1059 pages

"Choice of a technology does not automatically imply a choice of society - the nuclear option does not automatically lead to electrofascism nor does solar energy guarantee the blossoming of freedom. However, there are undeniable links between the option which favours nuclear power and a growth model patterned on productivity, disregard for constraints concerning non-mercantile issues, and exploitation of the third world The demands of *nuclear fuel cycle management encourage a centralised decision-making process which for purposes of a so-called technical/scientific rationale can increasingly escape control by the ordinary citizen*"

This quotation which is set out at the beginning of the thesis for a Doctorate (doctorat d'Etat) submitted recently by Mr Baleynaud does not solely stress the interest of undertaking a detailed study of the legal system which has enabled France to engage in an ambitious nuclear power generation policy, but also illustrates the reasons why the author examines all the social/economic and political aspects which have influenced the determination of this legal framework.

Mr. Baleynaud makes a remarkably comprehensive and detailed analysis of all the factors which have contributed to shaping progressively the institutions which actuate nuclear power generation and the legal and regulatory texts which govern such activities in France.

It is not possible to reproduce in a few lines the content of a study as vast as this and only certain of the main chapter headings will be discussed here. The first part of the thesis covers the choice of the nuclear power generation policy:

Role of institutions in the choice of such a policy

- Definition of the nuclear power generation policy by the Executive (institutional framework and guiding principles)
- Means of the nuclear power generation policy the nuclear public sector (organisational principles and competent public establishments)

. Role of the legislative authority in the nuclear power generation choice (nuclear debate and parliamentary control)

. Legislation specific to nuclear power generation.

Role of the ordinary citizen in the nuclear power generation policy choice

. Intervenors with a general or specific interest in the nuclear debate

. Knowledge of public opinion

. Political expression on the nuclear power generation field (referendum, election).

The second part of the study deals with implementation of the nuclear power generation policy

Role of the Administration

. Basis and application of legal rules specific to nuclear power plants

. Legal rules of ordinary law (different procedures applicable to power plants)

Role of the ordinary citizen in implementing the nuclear power generation policy

. Consultation of the public

. Recourse by the public.

A collection of the main legislative and regulatory texts in force, the most significant case-law decisions and a detailed bibliography complete this book which will be extremely useful for researchers and legal practitioners striving for a better understanding of the mechanisms underlying the institutional framework of the regulation of the French nuclear power generation programme.

• *Federal Republic of Germany*

Hellmut Wagner/Eberhard Ziegler/Klaus-Detlef Closs, Risikoaspekte der nuklearen Entsorgung, Nomos-Verlagsgesellschaft, Baden-Baden 1982, 200 pages

This book deals with the problems of "Entsorgung", namely reprocessing of spent fuel, interim storage of spent fuel and nuclear waste, disposal and final storage of nuclear waste. Closs gives a comprehensive review of the scientific and technical aspects of the problem, Ziegler examines the respective legal provisions, and Wagner considers questions of constitutional law. This latter part is of particular interest given that

another German author (Hasso Hofmann, see Nuclear Law Bulletin No 28) has stated that the German "Entsorgung" provisions are partly not in line with the Constitution. Wagner disproves Hofmann's opinion.

Norbert Pelzer, Begrenzte und unbegrenzte Haftung im deutschen Atomrecht, Nomos-Verlagsgesellschaft, Baden-Baden 1982, 67 pages

The Government of the Federal Republic of Germany reflects on the introduction of an unlimited nuclear liability in German law. The author investigates the legal problems which are connected with this important change of the principles of nuclear law. In particular, he deals with the question of whether an unlimited liability is in line with the Paris Convention on Third Party Liability in the Field of Nuclear Energy He comes to the conclusion that, under certain conditions, the Paris Convention does not hinder the introduction of an unlimited liablity by countries party to the Convention

Atomgesetz mit Verordnungen (Atomic Energy Act and Associated Decrees). Introduction by Prof. Hans Fischerhof, 9th Edition, Nomos Verlagsgesellschaft, Baden-Baden 1982, 319 pages

This book, now in its ninth edition, gives the texts, in full, of the major items of German nuclear legislation and includes, amongst others.

- the Atomic Energy Act 1959, as amended;
- the Ordinance of 18th February 1977 on licensing procedures for nuclear installations under Section 7 of the Atomic Energy Act, as amended on 31st March 1982;
- the Ordinance of 13th October 1976, as amended, on protection against ionizing radiation;
- the Ordinance of 25th January 1977 on financial security under the Atomic Energy Act;
- the Ordinance of 28th April 1982 on advance contributions towards the construction of federal installations for the safe containment and disposal of radioactive waste.

Also included is an extract from the rules governing violation of laws relevant to nuclear energy. The final sections list the regulations covering state responsibilities and include tables showing the delegation of these responsibilities.

World Nuclear Order and Equality of States, Wolfgang Graf Vitzthum, separate print from Law and State, Institut fur Wissenschaftliche Zusammenarbeit, Tubingen 1982, 47 pages

Law and State is a biannual collection of recent German contributions to this field. The aim of the series is to keep scholars, administrative officers and relevant institutions in other countries informed on German research studies in international law, political science and sociology. Therefore, significant contributions are selected and translated into English to facilitate access to these studies by an international audience

This article discusses the concepts of "world nuclear order" and "equality of States" by tracing the development of traditional international nuclear law (Part I). The two concepts of a nuclear order which have been called hegemony-based and co-operative, respectively, can then be explored in greater depth in their proper contexts The London Guidelines and the American Non-Proliferation Act are examined next in the light of the principle of the equality of States (Part II) and then of the International Nuclear Fuel Cycle Evaluation deliberations (Part III), following which the question of the existence of a sufficient factual basis for equality is examined, that is to say, the problem of the possible inability of the present international system to implement the principle of equality, at any rate for the nuclear sector (Part IV) Finally, before considering the outlook for legal reform (Part VI) other parallel egalitarian world orders are explored (Part V).

• *INLA*

Nuclear Inter Jura '79 Proceedings, Buenos Aires, 1981, 558 pages

This compilation of papers and addresses reflects the proceedings of the Fourth Congress of the International Nuclear Law Association held in Buenos Aires in 1979. Papers appear in their original language: English, French, German or Spanish. Occasionally, a brief English abstract accompanies a text reproduced in one of the other languages. Almost 170 participants attended the Congress. Highlights of papers follow by Session, illustrating the wide variety of views espoused at the meeting.

Technology Transfer

Know-how contracts play an important role in nuclear law because importing nations usually purchase expertise as well as equipment. Ideally, contracts should incorporate gradual stepwise transfer, allowing receiving nations to assimilate complex information and develop necessary expertise. Conversely, research contracts are more uniform than technology transfer agreements. While representatives of importing nations called for increased international legislation, lawyers from exporting nations insisted on freedom of contract, arguing that parties must negotiate flexible technology transfer concurrently with formulation of the construction contract itself.

Nuclear Non-Proliferation

The American Nuclear Non-Proliferation Act of 1978 generated several commentaries. Americans observed that it is often difficult for the United States to reconcile the dual objectives of becoming a reliable supplier while at the same time ensuring non-proliferation, safety and environmental protection. The papers presented and the ensuing discussions showed that, through informal policies, America has sought to balance non-proliferation concerns with the needs of importing nations, but that importing nations view the Act as creating a credibility gap, signalling America's preoccupation with political priorities rather than attention to practical needs of industry. Most authors favoured continued discussion in international fora, with broad interpretation of existing multilateral agreements to incorporate non-proliferation policies. Importing nations suggested expansion of the IAEA's role beyond mere enforcements of the Non-Proliferation Treaty.

Radioactive Waste Management

The papers stressed that in order to achieve public acceptance of radioactive waste management policies, governments should institute indemnification agreements guaranteed by the State to ensure compensation. International co-operation is more advanced in scientific information exchange than in legal and administrative co-ordination. The United States has instituted a detailed system of waste management regulation which is the case for only a few other countries. Standards which reflect cost-benefit analysis do not yet allocate costs between the public and private sector because of the difficulty of estimating future expenses

Nuclear Third Party Liability and Insurance

Nuclear operators worldwide can now acquire property damage insurance and may also take out insurance against machinery breakdown and consequential loss, as well as cover for non-nuclear risks In several European nations, potential cross-liability problems exist because several licensed operators may occupy the same site. The Three Mile Island accident provoked discussion on liability and insurance conditions in the Federal Republic of Germany. Some nations, like Argentina, still must consider proposals for initial nuclear third party liability laws.

Reactor Licensing

According to certain reports, there may be enough similarities in national licensing laws to permit lawyers to draft a uniform international statute, subject to certain adaptations at national level. The public must accept nuclear energy as a viable energy alternative, therefore, public participation in the licensing process is crucial. In the United States, utilities are anxious to simplify the complex licensing system and to curtail public participation as well as eliminate antitrust reviews In the Federal Republic of Germany, licensing includes measures for storing spent fuel on site but waste disposal at regional sites and the national centre is a separate administrative process, not connected to licensing *per se*. It seems that no nation has yet adequately dealt with design of surveillance measures to be implemented in the case of permanent shutdown of nuclear installations.

Advisory Material for the Application of the IAEA Transport Regulations, Second Edition, IAEA Safety Series No. 37, Vienna 1982, 143 pages

This new IAEA Safety Guide supplements the IAEA Regulations for the Safe Transport of Radioactive Materials, 1973 Revised Edition as amended in 1979 (Safety Series No 6), and recommends procedures that might be followed in implementing them

Apart from being updated to cover the amended version of the Regulations, the Guide contains additional information on quality assurance and nuclear safety. The information is presented in sections equivalent to those in the Regulations to facilitate cross-referencing.

The Guide is intended for designers, manufacturers, competent authorities, applicants for approval, consignors, carriers, customs authorities and emergency teams.

Basic Safety Standards for Radiation Protection, 1982 Edition, IAEA Safety Series No. 9, jointly sponsored by the IAEA, ILO, NEA/OECD and WHO, 172 pages

By this publication, the International Atomic Energy Agency (IAEA), the World Health Organisation (WHO), the International Labour Organisation (ILO) and the OECD Nuclear Energy Agency (NEA) jointly provide a world-wide basis for harmonized and up-to-date radiation protection standards These new Basic Safety Standards, published by the IAEA on behalf of the four sponsoring organisations, are based upon the latest recommendations of the International Commission on Radiation Protection (ICRP) which are essentially contained in its Publication No 26.

One of the main features of this revision is an increased emphasis on the recommendation to keep all exposures to ionizing radiation as low as reasonably achievable, economic and social factors being taken into account, consequently, radiation protection should not only apply the basic dose limits but also comply with that recommendation Detailed guidance is given to assist those who have to decide on the implementation of the recommendation in particular cases Another important feature is the recommendation of a more coherent method for achieving consistency in limiting risks to health, irrespective of whether the risk is of uniform or non-uniform exposure of the body.

This publication is intended for use by the appropriate competent authorities in the Member States of the sponsoring organisations and also to provide general guidance for organisations representing employers or workers The main text has been written in the form of regulations. For some competent authorities it may serve as a regulatory basis for the radiation protection of workers and members of the public, while other competent authorities may wish to refer to this text and make regulations more specifically adapted to their particular needs and conditions.

Annex IV to the publication is intended to provide supplementary information and practical guidance.

Guidebook on the Introduction of Nuclear Power, IAEA Technical Reports Series No 217, 1982, 349 pages

In response to the special needs of countries that are planning or intend to introduce nuclear power, the International Atomic Energy Agency in 1975 published a guidebook on "Steps to Nuclear Power" The guidebook has found wide acceptance and has been extensively used. Since its publication new developments affecting many aspects of nuclear power have taken place, additional knowledge and experience in the planning and implementation of nuclear power programmes and projects have been accumulated In view of these considerations, the IAEA has published the "Guidebook on the Introduction of Nuclear Power", which is intended to replace the earlier guidebook and to provide updated information and guidance to decision makers, planners, managers and professional staff on the work that has to be undertaken in the preparation for and introduction of nuclear power in a country.

This Guidebook has been structured into three parts The first part contains a survey of nuclear power, with the objective of providing general background information to the reader on the present status and future prospects of nuclear power and on the technical and economic aspects of available power reactor types and nuclear fuel cycles

In the second part, the special aspects and considerations relevant to the introduction of nuclear power in a country are discussed The subject is subdivided into three main headings: the technical aspects and national requirements, the safety and environmental considerations, and the international aspects of nuclear power. Emphasis is placed on the tasks to be performed within the country introducing nuclear power, on responsibilities that cannot be delegated and on the need for adequate national infrastructures (including the legal framework) and for long-term commitments

The third part of the Guidebook contains more detailed information and guidance on the planning and preparatory stages of launching a first nuclear power project, including in particular nuclear power programme planning, siting, feasibility studies, bidding and contracting. Design, construction and operation are covered in a brief overview for the sake of completeness.

Nuclear Power, the Environment and Man, Information Booklet prepared jointly by IAEA and WHO, 1982, 195 pages

During the last ten years since the United Nations Stockholm Conference of 1972 on the Environment focused the world's attention on the importance of protecting and conserving the environment, new knowledge and experience have been gained on the environmental and health effects of the use of nuclear power. This is the subject of an information booklet jointly published by two United National Organisations, the IAEA and WHO

The booklet offers an up-to-date review of this complex subject, expanding upon an earlier IAEA/WHO publication entitled "Nuclear Power and the Environment", issued in 1973. It identifies a number of problems present and to come, and the solutions proposed through the work at national and international levels It further explains the principles of reactor safety design, including the concept of "defence in depth" It also describes past experience and present status of the management of radioactive

waste, in particular, it provides a survey of national activities and plans in the handling of highly radioactive waste.

The booklet contains a list of treaties and conventions relating to environmental protection.

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NUCLEAR LAW Bulletin

SUPPLEMENT TO N° 30

December 1982

• *Federal Republic of Germany*

CONSOLIDATED TEXT OF THE 1977 ORDINANCE ON THE PROCEDURE FOR LICENSING NUCLEAR INSTALLATIONS, DATED 31ST MARCH 1982*

(Bundesgesetzblatt I, p. 412)

As provided in Section 2 of the first amending Order of 31st March 1982 (BGBl, I. p. 409), making certain changes to the Nuclear Installations Ordinance, the text is hereby published of the Nuclear Installations Ordinance in the form applicable as from 1st May 1982.

PART I

SCOPE, LICENCE APPLICATION AND SUPPORTING DOCUMENTS

Section 1 - Scope

For those installations specified in Section 7(1) and (5) of the Atomic Energy Act the procedure for granting a licence or partial licence or for issuing a provisional decision shall be in accordance with this Ordinance, unless otherwise provided in Section 7(4) (first and second sentence), Section 7a, 7b or Section 8(2) (second sentence) of the Atomic Energy Act.

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* Unofficial translation by the Secretariat. A translation of the Ordinance of 18th February 1977 is reproduced in the Supplement to Nuclear Law Bulletin No. 19. The amendments to the text of 1977 are printed in italics.

Section 2 - Form and content of the licence application

(1) The application shall be made in writing to the licensing authority.

(2) The application shall:

1. state the name and place of residence or headquarters of the applicant;

2. specify whether the application is for a licence or a provisional decision;

3. give the location of the site and details concerning the type and extent of the installation.

Section 3 - Supporting documents

(1) The application shall be accompanied by all such supporting documents as are necessary to establish that the conditions for the grant of a licence are fulfilled, in particular:

1. *a safety report enabling third parties to decide whether their rights may be prejudiced by effects connected with the installation and its operation. For this purpose, the installation and its operation shall be described and illustrated with the aid of plans and general drawings. The safety report shall describe and explain the design (basic design characteristics), safety design principles and functioning of the installation including its operational and safety systems. Any effects connected with the installation and its operation, including those of accidents within the meaning of Section 28(3) (fourth sentence) of the Radiation Protection Ordinance (design basis accidents) shall be described together with the preventive measures envisaged in compliance with Section 7(2) No. 3 of the Atomic Energy Act;*

2. supplementary plans, drawings and descriptions of the installation and its component parts;

3. details of measures envisaged for the protection of the installation and its operation against disturbance or other action by third parties within the meaning of Section 7(2) No. 5 of the Atomic Energy Act;

4. information enabling an assessment to be made of the reliability and specialised skills of persons responsible for the construction of the installation and for the management and control of operations;

5. information from which it can be established that persons otherwise engaged in the operation of the installation possess the knowledge required under Section 7(2) No. 2 of the Atomic Energy Act;

6. a schedule setting out all information relevant to the safety of the installation and its operation, together with the measures envisaged to control incidents and accidents, and an outline plan for the inspections envisaged of significant parts of the installation from the safety standpoint (safety specifications);

7. proposals concerning the provision of financial security to cover any liability to pay compensation for damage;

8. a schedule of measures proposed for maintaining the purity of water, air and the soil.

(2) The information referred to in subsection (1) No. 3 above shall be submitted separately. Where the other documents referred to in subsection (1) contain a trade or industrial secret they shall be marked accordingly and submitted separately also. To the extent that it is possible without divulging the secret, their content must be described in the documents to be made available for public inspection under Section 6 in such detail that third parties are able to determine whether and to what extent they may be affected by the installation.

(3) In addition to the documents referred to in subsections (1) and (2) (third sentence) the applicant shall submit to the licensing authority a short description, in simple terms suitable for public inspection, of the installation and the effects it is expected to have on the general public and the neighbourhood. He shall also submit a list of the documents submitted in support of the application and shall specifically indicate those documents which contain a trade or industrial secret.

(4) Where the documents submitted are not sufficient for the purpose of examining the application, the applicant shall on the request of the licensing authority submit such further documents as are required within an appropriate period.

PART II

PARTICIPATION OF THIRD PARTIES

Section 4 - Public announcement of the project

(1) As soon as the documents required for public inspection (Section 6) are complete, the licensing authority shall publicly announce the project in its official information bulletin and in local newspapers circulating in the area surrounding the site of the installation. *Additional public announcement and deposit of documents for inspection shall only be necessary as prescribed in subsection (2) even in those cases covered by Sections 18 and 19. Such announcement shall be mentioned in the Federal Gazette.*

(2) Where the project is substantially modified in the course of the licensing procedure, the licensing authority may dispense with additional public announcement and deposit of documents for public inspection provided no new or changed circumstances would have to be pointed out in the safety report which could result in harmful effects to third parties. This is the case, in particular, where it can be shown that harmful effects to third parties are ruled out by the damage-prevention measures taken or planned by the person responsible for the project, or where the safety disadvantages of the modification are small in relation to the safety advantages. Additional announcement and deposit of documents for public inspection (Section 6) shall be necessary in the case of:

1. changes that might result in an increase in the yearly activity levels originally specified for the installation and in an increase of over 5 per cent in radioactivity in the environs raising its level to over 75 per cent of the maximum dose level set out in Section 45 of the Radiation Protection Ordinance;

2. changes in the design of the installation or in the layout of buildings to the extent that, within the framework of the safe management of design basis accidents, such changes might lead to a safety significant increase in the originally assumed stresses on parts of the installation; for an assessment of what is meant by safety-significant the second sentence of this subsection shall apply mutatis mutandis;

3. changes to safety systems which might give reason to fear that their functional reliability in the safe management of design basis accidents might be significantly reduced;

4. an increase in the thermal power output or maximum fission product inventory of over 10 per cent of the figures calculated for planned full power operation; or

5. an increase of over 10 per cent in the planned storage capacity for irradiated fuel elements.

Where additional public announcement and deposit of documents for inspection is required the right to submit objections and the discussion shall be confined to the intended changes. This shall be mentioned in the announcement.

(3) Subsection (2) shall apply mutatis mutandis to an application for a licence to make a substantial change to an installation or to the operation thereof under Section 7(1) of the Atomic Energy Act.

(4) Public announcement and the deposit of documents for inspection may further be dispensed with where the application relates to an installation for the fission of nuclear fuel whose maximum power does not exceed one thermal kilowatt continuous power or which serves or is to serve for the propulsion of ships.

(5) Public announcement and the deposit of documents for inspection may also be dispensed with where the application relates to the decommissioning of an installation under Section 7(1) of the Atomic Energy Act or to the safe containment of a finally decommissioned plant. Where the application is for the dismantling of the installation or parts of the installation, subsection (2) shall apply mutatis mutandis.

Section 5 - Content of the announcement

(1) The announcement shall contain the information prescribed in Section 2(2). It shall also:

1. indicate where and when the application and the documents specified in Section 6(1) may be inspected and state the first and last days of the inspection period;

2. state that any objections are to be submitted within the inspection period /Section 6(1)/ to an agency to be specified in the announcement; attention shall be drawn to the legal consequences of Section 7(1) (second sentence).

3. fix a time and place for the hearing or indicate that a hearing will take place and will be announced in the same way as the project itself;

4. indicate that objections will be discussed at the hearing even in the absence of the applicant or objectors;

5. state that service of the decision taken on objections will be replaced by public announcement /*Section 15(3) (second sentence)*/ where *apart from the applicant* it would have to be served on more than 300 persons.

(2) A period of one week shall elapse between the public announcement of the project and the beginning of the inspection period. The relevant dates shall be determined by reference to the probable day of publication of the official information bulletin or of the newspaper last to appear.

(3) A period of at least one month shall elapse between the end of the inspection period and the hearing.

Article 6 - Deposit of the application and supporting documents for inspection; inspection of files

(1) During a period of two months the following documents shall be kept available for inspection during working hours at the offices of the licensing authority and of an appropriate agency in the vicinity of the project site:

1. the application;

2. the safety report pursuant to Section 3(1) No. 1;

3. the short description pursuant to Section 3(3).

(2) Third parties shall be entitled on request to a copy or photocopy of the short description.

(3) The licensing authority, exercising due discretion, may authorise the inspection of files; Section 29(1) (third sentence), (2) and (3) of the Administrative Procedure Act shall apply *mutatis mutandis*.

Section 7 - Objections

(1) Objections may be submitted during the inspection period in writing to or may be taken down in writing by the licensing authority or other agency specified in accordance with Section 5(1) No. 2 above. On the expiry of the inspection period further objections shall be excluded unless based on some special claim under private law.

(2) The applicant shall be given notice of the content of objections. Authorities involved by virtue of Section 7(4) (first sentence) of the Atomic Energy Act shall be notified of the content of objections affecting matters for which they are responsible.

PART III

THE HEARING

Section 8 - Object and purpose

(1) The licensing authority shall discuss orally with the applicant and objectors those objections submitted within the prescribed time limit. Objections submitted within the prescribed time limit shall be those submitted within the inspection period to the agencies specified in Section 5(1) No. 2.

(2) The purpose of the hearing shall be the discussion of objections submitted within the prescribed time limit, to the extent that this is relevant to deciding whether the conditions for the grant of a licence have been met. Every objector shall be given an opportunity to explain the nature of his objection.

Section 9 - Special objections

Objections based on special private law claims shall not be dealt with at the hearing; they shall be referred by written decision to the proper courts through the normal process of law.

Section 10 - Cancellation

(1) No hearing shall be held where:

1. no objections to the project are submitted or no objections are submitted within the prescribed time limit;

2. objections submitted in due time have been withdrawn; or

3. the objections submitted relate exclusively to special private law claims.

(2) The applicant shall be notified of the fact that no hearing is to take place.

Section 11 - Postponement

(1) The licensing authority may postpone a hearing already announced where this is necessary for the proper conduct of the hearing. The time and place of the new hearing shall be fixed as soon as possible.

(2) The applicant and persons having submitted objections within the prescribed time limit shall be notified of the postponement of the hearing. Such notification may be effected by public announcement under Section 4(1).

Section 12 - Procedure

(1) The hearing shall not be held in public. The representative of the licensing authority who conducts the hearing (presiding officer) shall decide who, in addition to the applicant and persons having

submitted objections within the prescribed time limit, shall be entitled to take part in the hearing.

(2) The presiding officer may decide that certain objections be considered together. In such case he shall make known the order of the discussions. He may for a specified period restrict the right to take part in the hearing to those persons whose objections are to be discussed together.

(3) The presiding officer shall accord the right to speak and may withdraw it from any person who exceeds the time limit fixed by him, or who makes remarks unrelated to the subject matter of the hearing or not relevant to the objection under discussion.

(4) The presiding officer shall be responsible for the orderly conduct of the hearing. He may have persons who do not comply with his directions removed. The hearing may be continued in the absence of such persons.

(5) The presiding officer shall close the hearing when its object has been achieved. He may also declare the hearing closed where, after an adjournment, the hearing is once again disturbed by one or more of the participants in such a way that it is no longer possible to conduct it in an orderly fashion. Persons whose objections have not been discussed or the discussion of whose objections has not been terminated may within one month of the closure of the hearing explain their objections in writing to the licensing authority; *those present shall be so informed at the closure of the hearing.*

Section 13 - Minutes

(1) Minutes of the hearing shall be taken. The minutes shall contain:

1. the place and date of the hearing;
2. the name of the presiding officer;
3. the subject matter of the licensing procedure;
4. details of the discussions and the results of the hearing.

The minutes shall be signed by the presiding officer and by the reporter, if any. Anything recorded in a document annexed to the minutes and designated as an annex shall be deemed to be recorded in the minutes; such annex shall be referred to in the minutes. The licensing authority may record the hearing on sound recording media for the purpose of drawing up the minutes. Such records shall be destroyed *once the time to appeal against the decision on the licence application has expired. Where in the case of a procedure relating to a provisional decision the conditions of Section 7a(1) (second sentence) of the Atomic Energy Act are met, the record shall be destroyed once the provisional decision has become valid.*

(2) The applicant shall be given a copy of the minutes. A copy shall also be given, on request, to any person who has submitted an objection within the prescribed time limit.

PART IV

THE LICENCE

Section 14 - Examination of the application

The examination of the application by the licensing authority shall in addition to the licensing requirements of Section 7(2) of the Atomic Energy Act also relate to the observance of all other public law provisions of relevance to the project.

Section 15 - Decision

(1) The licensing authority shall make its decision in the light of the overall outcome of the procedure.

(2) The application shall be refused where the examination reveals that the conditions for the grant of a licence have not been met and that compliance with them cannot be secured through supplementary provisions. The application may be refused where the applicant fails to comply within an appropriate specified period with a request for additional supporting documents.

(3) The decision and the grounds therefor shall be set out in writing and shall be served on the applicant and objectors. *In addition, the decision shall be publicly announced in accordance with Section 17. Where the decision has to be served on more than 300 objectors service shall be effected by public announcement.*

(4) Where the procedure is terminated in some other manner, the applicant and objectors shall be notified accordingly; *where more than 300 persons have to be so notified the notification may be effected in accordance with Section 4(1).*

Section 16 - Content of the licensing decision

(1) The licensing decision shall specify:

1. the name and place of residence or headquarters of the applicant;

2. whether a licence or partial licence is granted, together with the legal basis thereof;

3. the exact definition of the subject matter of the licence including the location of the installation;

4. any supplementary provisions attached to the licence;

5. the basis for the main factual and legal findings of the authority in reaching its decision, and for the treatment of objections.

(2) The licensing decision shall include:

1. a statement to the effect that the licensing decision is made without prejudice to the decisions of other authorities required for the project as a whole by virtue of other public law provisions; and,

2. a notice as to the right of appeal.

Section 17 - Service by public announcement

(1) Public announcement shall be effected by advertisement of the operative part of the decision and of the notice as to the right of appeal in the manner prescribed in Section 4(1); attention shall be drawn to any conditions.

(2) A copy of the entire decision shall be kept available for inspection at the offices of the licensing authority and other agencies referred to in Section 6(1) for a period of two weeks from the date of the announcement. The beginning of this period shall be determined by reference to the expected publication date of the official information bulletin or last appearing daily newspaper. The public announcement shall state when and where the decision and the grounds therefor may be inspected and copies requested under sub-section (3) below. On the expiry of such inspection period the decision shall be deemed to have been served *even on third parties not having submitted any objection;* this shall be stated in the announcement.

(3) After the public announcement has appeared, objectors may apply in writing for copies of the decision and the grounds therefor pending the expiry of the time allowed for appeal.

PART V

SPECIAL PROVISIONS FOR PARTIAL LICENCES AND PROVISIONAL DECISIONS

Section 18 - Partial licence

(1) A partial licence may be granted upon application where a preliminary examination reveals that the conditions for the grant of a licence will be met as regards the construction and operation of the installation as a whole and that a legitimate claim exists for the grant of a partial licence.

(2) Where an application has been made under subsection (1), the licensing authority may agree that the final information in the supporting documents shall relate only to the subject matter of the partial licence. In addition, information shall be submitted enabling, upon preliminary examination, an adequate assessment to be made as to whether the licensing requirements will be met with respect to the construction and operation of the installation as a whole.

ection 19 - Provisional decision

1) The application for a provisionsal decision shall be made in writing to the licensing authority of the Land in which the project is to be carried out.

2) In the case of applications not relating to a specific site the licensing authority shall announce the project in its official information bulletin, in the federal Gazette and in appropriate daily newspapers.

3) The provisional decision shall specify:

1. the name and place of residence or headquarters of the applicant;

2. that a provisional decision is issued and the legal basis therefor;

3. the precise designation of the subject matter of the provisional decision;

4. the conditions and reservations subject to which the provisional decision is issued;

5. the basis for the main factual and legal findings underlying the decision of the licensing authority, and on which the objections raised were dealt with.

(4) The provisional decision ought to contain:

1. a reference to Section 7a(1) (second sentence) of the Atomic Energy Act;

2. a statement that the provisional decision does not entitle the applicant to construct the installation or parts thereof;

3. a statement that the provisional decision is issued without prejudice to administrative decisions required for the project as a whole by virtue of other public law provisions; and

4. a notice as to the right of appeal.

(5) Section 18(2) shall apply *mutatis mutandis*.

PART VI

FINAL PROVISIONS

Section 20 - Transitional Provisions

Procedures already begun shall be completed in accordance with the provisions of this Ordinance. Time limits which have begun to run before the entry into force of this Ordinance shall be calculated in accordance with the provisions previously in force. Where new supporting documents are required under Section 3(1), they shall be submitted subsequently; the authority shall fix an appropriate period for this purpose. The service of decisions may be effected by public announcement under Section 17 even where the announcement of the project does not contain the statement prescribed in Section 5(1) No. 5.

Section 21 - Berlin Clause

This Ordinance shall also apply to the Land Berlin by virtue of Section 14 of the Third Transitional Act in conjunction with Section 58 (second sentence) of the Atomic Energy Act.

/Section 22 - Entry Into Force/

• *Italy*

ACT NO. 1240 OF 15TH DECEMBER 1971 CONCERNING THE NATIONAL NUCLEAR ENERGY COMMISSION (CNEN) AS AMENDED BY ACT NO. 84 OF 5TH MARCH 1982 REORGANISING THE CNEN AS THE NATIONAL COMMISSION FOR RESEARCH AND DEVELOPMENT OF NUCLEAR AND ALTERNATIVE ENERGY SOURCES (ENEA)*

TITLE I

Section 1

The National Nuclear Energy Commission, established under Act No. 933 of 11th August 1960, as amended by Act No. 1240 of 15th December 1971, is hereby renamed the National Commission for Research and Development of Nuclear and Alternative Energy Sources (ENEA) and shall be excluded from the application of Act No. 70 of 20th March 1975.

In all legislation and regulations currently in force, the words *National Commission for Research and Development of Nuclear and Alternative Energy Sources (ENEA)* shall replace the words *National Commission for Nuclear Energy (CNEN)*.

For the purpose of this Act, alternative energies mean those from sources other than hydrocarbons.

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* Unofficial translation by the Secretariat

CNEN = Comitato Nazionale per l'Energia Nucleare
ENEA = Comitato Nazionale per la Ricerca e lo Sviluppo dell'Energia Nucleare e delle Energie Alternative.

Section 2

Within the framework of national energy policy ENEA shall be responsible for promoting the development and raising the standards of national industry, paying due regard to health and the environment.

For these purposes ENEA shall:

(1) carry out and promote, in collaboration where appropriate with other interested bodies, investigations, research, development and demonstrations connected with the energy technologies within its field or with energy saving in the various stages of production, transport or utilisation, including the disposal of wastes produced by such processes;

(2) carry out, promote and co-ordinate studies, research and experiments in regard to environmental and health implications for workers and the public of exploiting and using energy sources, and in regard to the safety of energy-generating plants including nuclear plants, and protection against ionizing radiation;

(3) make provision to pass on knowledge acquired and the results of research to industrial operators, and shall co-operate with the latter in the design and construction of prototype components and plants;

(4) co-operate scientifically, technologically and industrially with international and foreign agencies active in its field, within the framework of international agreements, and in accordance with directives from the Minister of Industry, Commerce and Crafts and the Ministry of Foreign Affairs, having obtained the opinion of the Minister responsible for co-ordinating scientific and technological research initiatives;

(5) take measures and carry out inspections relevant to the nuclear safety and health protection of workers and the public against radiation hazards; supervise special fissile materials, raw materials and minerals; supervise the application of passive physical protection measures for nuclear plants and materials; ensure compliance with international agreements relating to the safeguards applicable to special fissile materials or to any raw materials or ores;

(6) promote and encourage personnel training in energy technologies;

(7) disseminate and make public information about energy problems;

(8) provide advice and consultancy, and undertake technical assessments on behalf of central, regional and local government on problems connected with the production and use of energy. Section 107 of Decree No. 616 of 24th July 1977 of the President of the Republic shall apply to the ENEA.

For the purpose of fulfilling its responsibilities under sub-paragraphs (1), (2), (3) and (4) of this Section, the ENEA may:

(a) enter into agreements with regions and local authorities;

(b) on the basis of appropriate contracts, entrust universities, research and experimental institutes, or agencies and companies engaged in studies, research and experimental activity, with the carrying out of its own scientific programmes;

(c) enter into collaboration agreements with national industries, and make available to such industries skills, know-how, patent licences and facilities;

(d) promote the formation of industrial consortia in the form of joint-stock companies, or multinational or foreign enterprises or companies for the purpose of the industrial development of the energy technologies within its field and participate in such consortia, under programmes approved by the CIPE* subject to authorization by the Minister of Industry, Commerce and Crafts, who shall give prior notice thereof to Parliament.

The ENEA may acquire a majority holding in companies whose objects are research, development and demonstration in technology sectors within the field covered by the ENEA.

The ENEA shall acquire no more than a minority holding in companies whose objects are to develop the production or marketing of nuclear and alternative energies (excluding activities reserved to the ENEL** under Act No. 1643 of 6th December 1962 as amended). In such instances, its interest in national companies must take the form of patents, know-how, equipment, plants, infrastructure or skills.

Section 3

Upon the proposal of the ENEA the Minister of Industry, Commerce and Crafts shall present to the CIPE, in accordance with the directives of that Committee and for its approval, the five-year programme of work with budget forecasts covering the entire period.

Three months before the expiry of the five-year period, the Minister of Industry, Commerce and Crafts shall, upon the proposal of the Board of Management of the Commission, present the next five-year plan to Parliament.

Within the three months following approval of the five-year plan by the CIPE, the Minister of Industry, Commerce and Crafts shall present to Parliament, together with a detailed report on the programme and results achieved during the preceding five-year period, draft legislation to provide ENEA with the required funds within the limits of the resources available in the annual and pluriannual government budget. In October of each year, the Minister of Industry, Commerce and Crafts shall report to Parliament on progress in implementing the programme.

The programme shall be amended where necessary in accordance with the same procedures.

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* Interministerial Committee for Economic Planning (Comitato Interministeriale per la Programmazione Economica).

** National Electricity Board (Ente Nazionale per l'Energia Elettrica).

Section 4

The organs of the ENEA shall be:

the Chairman;

the Board of Management;

the Executive Committee;

the Board of Auditors.

Section 5

The Chairman shall be appointed by Decree of the President of the Republic, upon the proposal of the Ministry of Industry, Commerce and Crafts having obtained the opinion of the Council of Ministers. His term of office shall be five years and he may be reappointed for only one further term.

The function of the Chairman shall be incompatible with that of administrator or employee of any public economic undertaking or membership of the board of directors of any commercial company.

The Chairman shall forfeit his office if a situation of incompatibility has not been terminated within sixty days of its communication.

An employee of the Government or of a non-profit making public agency appointed as Chairman shall be given leave of absence for that purpose.

Section 6

The Chairman:

(a) shall be the legal representative of the Commission;

(b) shall convene and chair the Board or Management;

(c) shall convene and chair the Executive Committee and draw up its agenda with the advice of the Director General;

(d) shall superintend the general functioning of the Commission;

(e) shall present to the Minister of Industry, Commerce and Crafts the budget estimates and final accounts and, by 30th April in each year, a report on the activities of the previous year duly approved by the Board of Management.

Section 7

The Board of Management shall consist of:

(1) the Chairman;

(2) eight members, five being experts in energy science and technology and their applications, two being management specialists and one being an industrial technology specialist;

(3) two experts, one designated by the Minister for the Budget and Economic Programming and the other by the Minister for the Co-ordination of Scientific Research;

(4) the Director General of the General Directorate for Energy Sources and Basic Industries within the Ministry of Industry, Commerce and Crafts;

(5) three Commission employees, one belonging to the research staff, to be chosen from shortlists of three candidates each presented by the most representative unions in the Commission.

Members of the Board of Management shall be appointed by Decree of the President of the Council of Ministers, with the advice of the Council of Ministers, upon the proposal of the Minister of Industry, Commerce and Crafts, for a five-year term of office. The Board of Management shall itself elect a Deputy Chairman for the five-year term. The Deputy Chairman, as well as performing duties delegated by the Chairman, shall stand in for him in case of absence or impediment.

The Board of Management shall be convened by the Chairman whenever he deems appropriate, or on the request of at least five members of the Board itself.

The Board of Management shall:

(a) adopt the international regulations of the Commission;

(b) attend to the implementation of directives of the CIPE and of the Minister of Industry, Commerce and Crafts and on the basis thereof, determine the pluriannual programmes of work of the Commission and any annual revisions;

(c) draw up budget estimates two months before the beginning of each financial year, and any budget alterations and the final accounts within four months of the end of the financial year, together with a report on achievements and progress with current activities;

(d) decide appropriations not delegated to other agencies or offices;

(e) decide matters referred to un sub-paragraphs (a), (b) and (c) of Section 2 (paragraph 3);

(f) elect the members of the Executive Committee;

(g) adopt regulations and contracts concerning staff status and remuneration;

(h) decide matters relating to staff recruitment and organisation, the appointment of directors, and the duties of and contracts for consultants;

(i) take decisions, where appropriate, on any delegation to the Executive Committee or to the Chairman of responsibility for staff employment contracts, having regard to its own decisions as to numbers and categories of staff, or of responsibility for the operational workings of the Commission subject to the general directives laid down by the Board;

(l)* take decisions, subject to the necessary limitations, and excluding the matters referred to in sub-paragraphs (a), (b) and (c) of Section 2, on any delegation to the Executive Committee, the Chairman, the Director General or to the Directors of operational units of power to enter into financial commitments, invite tenders, award contracts and issue orders for supplies;

(m) take decisions, within the financial limits laid down, in respect of any delegation to the Chairman of responsibility for entrusting specific studies or research of a technical, scientific, economic or legal nature to specially qualified persons outside the Commission.

The Board of Management shall be empowered to decide that membership of the Executive Committee is incompatible with any other professional activity and with public or private employment.

An employee of the government or of any non-profit making public agency invited to join the Executive Committee, but covered by an incompatibility decision of the Board of Management under the previous paragraph, shall be given leave of absence.

The Board of Management shall, subject to the provisions of this Act, have full management powers, and shall be responsible for the acts of the Commission for the purposes set out in Sections 1 and 2 of this Act.

The decisions of the Commission shall not be subject to approval by the supervisory authority.

Decisions under sub-paragraph (b) of paragraph 4 above relating to pluriannual programmes of work and any annual revision thereof shall be transmitted to the Minister of Industry, Commerce and Crafts, who shall submit them to the CIPE for decision in accordance with Section 3 above.

Decisions on matters referred to in sub-paragraphs (c) and (g) of paragraph 4 above shall be submitted to the Minister of Industry, Commerce and Crafts for approval. The Minister of Industry, Commerce and Crafts shall, having obtained the opinion of the Minister of the Treasury, within sixty days of the date of receiving decisions referred to in sub-paragraphs (c) amd (g) of paragraph 4 above, approve them or refer them back, giving reasons, for reconsideration by the Board of Management. On the expiry of the sixty day period, any decision not referred back shall become enforceable.

The Board shall take decisions by majority vote. In case of a tie, the Chairman shall have a casting vote. Two-thirds of the members of the Board including the Chairman or his substitute shall constitute a quorum.

In formulating programmes, the Board of Management shall obtain the opinion of a committee of not more than eight members selected from the scientific research staff.

Before considering programmes the Board of Management shall obtain the opinion of the workers' representative bodies concerning the financial and the organisational methods of implementing the programme. It shall also hear the opinions of the same bodies on the preparation and amendment of internal rules.

* Note by the Secretariat: the letters *j* and *k* are not included in the Italian alphabet.

Section 8

The Executive Committee shall consist of the Chairman of the Commission, who shall take the chair at its meetings, and of four members of the Board of Management elected by the Board from among the members mentioned in sub-paragraphs (2) and (3) of paragraph 1 of Section 7 above.

The Executive Committee shall:

(a) prepare the agenda and documentation necessary for Board meetings;

(b) replace the Board of Management in emergencies, adopting the necessary measures which shall be laid before the Board for ratification at its next meeting;

(c) perform any other functions delegated to it by the Board of Management.

Section 9

On the proposal of the Chairman of ENEA the Minister of Industry, Commerce and Crafts may establish by his own decree consultative committees for particular problems facing the Commission, for limited periods of time.

Section 10

The Chairman of the Board of Auditors and the auditors shall be appointed by Decree of the Minister of Industry, Commerce and Crafts for terms of office of five years. The Board shall consist of three members and three deputies, including one member acting as Chairman and one deputy appointed by the Ministry of the Treasury.

The Board shall review management decisions, ascertain that proper books and accounts have been kept and check cash balances.

The Board shall prepare a written report on the final accounts, report regularly to the Minister of Industry, Commerce and Crafts and may attend meetings of the Board of Management. The Chairman of the Board of Auditors, or a member of the Board delegated by its Chairman may attend meetings of the Executive Committee.

The Board of Auditors shall continue to perform its duties during periods of administration by a Commissioner.

Section 11

By Decree of the Minister of Industry, Commerce and Crafts, following consultation with the Minister of the Treasury, emoluments shall be determined for members of the Board of Management, Executive Committee and Board of Auditors.

Section 12

The Director General shall be appointed, upon the nomination of the Board of Management, by Decree of the Minister of Industry, Commerce and Crafts. His appointment may be terminated or revoked, or he may be suspended by Decree of the same Minister.

The remuneration of the Director General shall be fixed by the Board of Management.

Section 13

The Director General shall:

(a) attend meetings of the Board of Management and of the Executive Committee in an advisory capacity, with the right to put suggestions and proposals;

(b) attend to the implementation of decisions of the Board of Management;

(c) present budget estimates and final accounts to the Board of Management;

(d) supervise the activity of the Commission and represent it before the Board of Management;

(e) perform any other function inherent in the management of the Commission which is assigned to him by the Board of Management unless such function be reserved to any other body.

Any remuneration due to the Director General or other employee for the performance of external functions on behalf of the Commission shall be transferred to the ENEA budget.

Section 14

Rules governing the legal status, remuneration and pension arrangements of staff shall be set out in regulations adopted by the Board of Management, and shall give effect to agreements entered into with the trade unions.

For special purposes the Board of Management shall be empowered, notwithstanding the provisions of Act No. 230 of 18th April 1962, to recruit specially qualified technical or research staff on fixed term contracts.

The regulations shall be approved by the Minister of Industry, Commerce and Crafts in agreement with the Minister of the Treasury.

Section 15

Industrial property rights deriving from the fulfilment of employment contracts or the provision of services for ENEA, where the objects of such contracts or services include study, research and experimental activities remunerated as such, shall be the property of the Commission, except that the inventor shall have the right to be recognised as such.

An inventor shall receive a fair reward, in determining which the importance of the invention shall be taken into account.

Section 16

In the event of ascertained shortcomings liable to jeopardise the proper technical or administrative functioning of the Commission, or re-

peated failure to comply with directives from the Interministerial Committee for Economic Planning, the Board of Management may be dissolved by Decree of the President of the Republic upon the proposal of the Minister of Industry, Commerce and Crafts, having obtained the opinion of the Council of Ministers.

In such case the powers of the Chairman of the Board of Management shall be exercised by a Commissioner to be appointed in the same Decree as that dissolving the ordinary administrative organs.

Within six months of the appointment of the Commissioner, the Board of Management shall be reconstituted.

Section 17

The final accounts of ENEA shall be attached to the budget estimates of the Ministry of Industry, Commerce and Crafts for the financial period following that in which the final accounts were approved.

Section 18

Review of the proper management of the ENEA shall lie with the State Audit Board (Corte dei conti) as provided for under Sections 4, 7, 8, 9 and 12 of Act No. 259 of 21st March 1958.

Section 19

Following the submission of the final accounts to the Minister of Industry, Commerce and Crafts, the Chairman of the Board of Management or his representative shall report on the programmes implemented and research results achieved to a Parliamentary Commission consisting of five senators and five members of the lower house chosen by the Chairmen of both Chambers.

Section 20

ENEA shall perform the duties conferred upon it by Section 2 of the present Act with the assistance of its own assets, financial contributions of central government, and contributions from private bodies and any other income deriving from its activity.

The Board of Management of ENEA shall establish in advance criteria for determining suitable fees payable for carrying out tests, analyses, inspections and certification at the request of private bodies or public law agencies of the State, and criteria for determining charges payable in respect of services provided by the Commission under Act No. 1860 of 31st December 1962 and Decree No. 185 of the President of the Republic of 13th February 1964.

Decisions referred to in the above paragraph shall be subject to approval in accordance with paragraph 8 of Section 7.

Section 21

Capital and financial management of the Commission shall be governed by accounting rules adapted to the special nature of the Commission itself, and adopted by the Board of Management. These rules shall be approved by the Minister of Industry, Commerce and Crafts after obtaining the opinion of the Minister of the Treasury.

Section 22

Sections 1 to 11 and 17 to 19 of Act No. 933 of 11th August 1960 are hereby repealed.

Section 23

Legislative provisions relating to the financing of pluriannual ENEA programmes approved by the CIPE under Section 3 of the present Act shall be proposed by the Minister of Industry, Commerce and Crafts in agreement with the Minister of the Treasury, having regard to the opinion of the Minister for the Co-ordination of Scientific and Technological Research.

Any sums appropriated under financial legislation but not utilised within the financial year for which they were made shall be carried forward to supplement funds available in subsequent financial years for the purpose of giving effect to the pluriannual programmes to which they relate.

Section 24

A committee shall be established within the Ministry of Industry, Commerce and Crafts to advise on the industrial utilisation of nuclear energy and the co-ordination of activities of agencies operating in this field.

The Committee, chaired by the Minister of Industry, Commerce and Crafts, or his representative, shall be appointed by Decree of the Minister and shall consist of not more than ten members, designated by public and private operators in the nuclear sector, on the request of the Minister.

The term of office of the members of the Committee shall be five years.

TITLE II

NATIONAL INSTITUTE OF NUCLEAR PHYSICS

Section 25

The National Institute of Nuclear Physics(INFN)*, at present governed by the Ministerial Decree of 26th July 1967, shall be a public law agency with its own budget.

The Minister of Industry, Commerce and Crafts, in agreement with the Minister of Education, shall decide what ENEA assets shall be transferred to INFN to enable it to fulfil the duties assigned it, and ENEA is hereby authorized to transfer to the INFN the assets so determined.

* INFN = Istituto Nazionale di Fisica Nucleare.

Section 26

The Interministerial Committee for Economic Planning shall be responsible for the adoption of pluriannual programmes prepared by the INFN and transmitted to it by the Minister of Education.

Section 27

Legislative provisions relating to the financing of pluriannual INFN programmes approved by the CIPE in accordance with the preceding Section of this Act, shall be proposed by the Minister of Education in agreement with the Ministry of the Treasury.

Any appropriation under the financing enactments not utilised during the financial year for which they were made shall be carried forward to supplement the resources available in subsequent financial years within the limits of the pluriannual plan to which they refer.

This Act, bearing the State seal, shall be entered in the official record of the Acts and Decrees of the Italian Republic. All those concerned shall comply and ensure compliance therewith as the law of the State.