

NUCLEAR  
LAW  
Bulletin  
number 36

Contents

<i>Legislative and Regulatory Activities</i>	1
<hr/>	
<i>Case Law and Administrative Decisions</i>	2
<hr/>	
<i>International Organisations and Agreements</i>	3
<hr/>	
<i>Texts</i>	48
<hr/>	
<i>Bibliography</i>	73
<hr/>	

*This Bulletin includes a supplement*

*December 1985*

Nuclear Energy Agency  
Organisation for Economic Co-operation and Development



Pursuant to article 1 of the Convention signed in Paris on 14th December, 1960, and which came into force on 30th September, 1961, the Organisation for Economic Co-operation and Development (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, and
- to contribute to the expansion of world trade on a multilateral, non-discriminatory basis in accordance with international obligations

The Signatories of the Convention on the OECD are Austria, Belgium, Canada, Denmark, France, the Federal Republic of Germany, Greece, Iceland, Ireland, Italy, Luxembourg, the Netherlands, Norway, Portugal, Spain, Sweden, Switzerland, Turkey, the United Kingdom and the United States. The following countries acceded subsequently to this Convention (the dates are those on which the instruments of accession were deposited) Japan (28th April, 1964), Finland (28th January, 1969), Australia (7th June, 1971) and New Zealand (29th May, 1973)

The Socialist Federal Republic of Yugoslavia takes part in certain work of the OECD (agreement of 28th October, 1961)

*The OECD Nuclear Energy Agency (NEA) was established on 20th April 1972 replacing OECD's European Nuclear Energy Agency (ENEA) on the accession 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

© OECD, 1985

Application for permission to reproduce or translate  
all or part of this publication should be made to  
Director of Information, OECD

2, rue André-Pascal, 75775 PARIS CEDEX 16, France

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, Head of Section, Nuclear Co-ordination and Non-Proliferation, 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
- Mr. RIVALET, Legal Services, Ministry of Economic Affairs
- BRAZIL - Mrs. C. LINHARES LEITE, Attorney General, Comissao Nacional de Energia Nuclear
- CANADA - Mr. BARKER, Senior Counsel, Legal Services, Atomic Energy Control Board
- DENMARK - Mr. T. RØRDAM, 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 Department, Atomic Energy Commission
- GERMANY (Federal Republic) - The Institute of Public International Law of Göttingen University, Department of Nuclear Law (Dr. PELZER)
- GREECE - Greek Atomic Energy Commission
- IRELAND - Mr. SWEETMAN, Barrister-at-Law, Dublin
- Department of Industry and Energy
- ISRAEL - Mr. G. NATIV, Legal Adviser to the Israeli Atomic Energy Commission
- ITALY - 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. F. SAKAUCHI, Director, Research and International Affairs Division, Atomic Energy Bureau, Science and Technology Agency
- MEXICO - Mrs. M.A. DE LOURDES VEZ CARMONA, Instituto Nacional de Investigaciones Nucleares

- NETHERLANDS - Mr. V. FONTANE PENNOCK, 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
- PORTUGAL - Mrs. A. SETTE PIMENTA, Head, International Relations of the Nuclear Energy Department, General Directorate for Energy
- SPAIN - Ms. L. CORRETJER, Legal Adviser, Junta de Energia Nuclear
- SWEDEN - Mrs. K. HOKBORG, Legal Adviser, Ministry of Justice
- Mr. G. HEDELIUS, Legal Adviser, Swedish Nuclear Power Inspectorate
- Mr. C.G. HESSER, Legal Adviser, National Institute of Radiation Protection
- SWITZERLAND - Mr. W.A. BÜHLMANN, Head, Legal Services, Federal Office of Energy
- TURKEY - Mrs. F. KIPER, Head of External Relations, Turkish Atomic Energy Authority
- UNITED KINGDOM - Mr. D. GRAZEBROOK, Legal Adviser of the Atomic Energy Authority of the United Kingdom
- Mr. R. VENABLES, Assistant Treasury Solicitor, Department of Energy
- UNITED STATES - Ms. L. GILBERT, Office of the Executive Legal Director, Nuclear Regulatory Commission
- Mr. R. NEWTON, Assistant General Counsel for International Development and Defence Programmes, Department of Energy
- Ms. S. SHERMAN, Office of the General Counsel, Department of Energy
- URUGUAY - Dr. D. PEREZ PINEYRUA, Legal Adviser, National Atomic Energy Commission
- YUGOSLAVIA - Mr. M. TRAMPUZ, Secretary of the Nuclear Energy Commission
- IAEA - Mr. HA VINH PHUONG, Adviser, 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*

### RADIATION PROTECTION

#### 1985 Regulations on Ionizing Radiation (South Australia)

The Ionizing Radiation Regulations, No. 47 of 1985, published in the South Australian Government Gazette of 4th April 1985, took effect in part on 1st September 1985. The remainder of the provisions will enter into force on 1st April 1986. Made under the Radiation Protection and Control Act of 1982, referred to as the Act (see Nuclear Law Bulletin No. 32), the Ionizing Radiation Regulations (the "Regulations") implement the Act and prescribe the standards and procedures for radiation protection as they apply to the licensing, sale, construction, maintenance and use of radioactive substances, radiation emitting apparatus and radioactive ores.

The South Australian Health Commission (the "Commission") is the competent body responsible for administering the Regulations. Its authority extends, inter alia, to the registration of all radioactive substances, apparatus and ores, licensing, monitoring, investigations and record-keeping

#### General provisions for radiation protection

The Regulations are comprised of five major parts and a series of Schedules. The first part is of general character and provides, in addition to the definitions and the technical scope of application of the Regulations, the procedures which must be observed in the area of radiation protection under penalty of sanctions in case of non-compliance. Radiation protection standards and exposure limits are also given in this general part as well as the responsibilities of the radiation safety officers, instructions for monitoring of radiation workers, measures to be taken in case of an accident, and medical supervision of personnel.

The following parts deal with regulations specific to the licensing regime for the use of ionizing radiation for therapeutic or research purposes as well as the use and sale of ionizing radiation apparatus and radioactive substances.

### Licensing procedures

The provisions on licensing for radioactive substances, apparatus and ores are similar in their procedural scope. Application is made to the Commission, and all information required to complete the application is contained in the Schedules to the Regulations. Written notice must be submitted to the Commission prior to the sale or installation of any radiation-emitting apparatus and before any person may carry on a business in which he sells, installs or maintains any radioactive substance or device containing a radioactive substance. This notice must include detailed information on the proposed sale or venture and is required for both storage and disposal of radioactive material.

### Storage and disposal procedures

All radioactive substances covered by the Regulations must be accurately accounted for, labelled and adequately stored. During storage of these substances, information concerning the type of substance, its activity, the name of the person in whose care the substance has been placed and the type of facility in which it is stored, must be kept in a register. The first entry in the register must be recorded within 24 hours of possession. Requirements for storage premises vary depending on whether they contain sealed radioactive sources, unsealed radioactive substances, or radioactive ores such as uranium or thorium.

Approval for disposal of radioactive substances or ionizing apparatus must be obtained from the Commission. The application for approval may relate to the disposal of one or more unsealed substances on one occasion or may relate to a proposal to dispose of a variety of unsealed substances on more than one occasion. Such operations may extend over a period of 12 months from the date of approval.

In deciding to grant or refuse an application for disposal of either a sealed radioactive source or unsealed radioactive substance, the Commission takes many factors into account. Due regard is given to the nature and activity of the substance or source, the degree to which the substance or source can be safely disposed of; the method and place of disposal; the effect of the disposal on the health of any person or the public; and whether the proposed disposal is consistent with its general objective. In any case, the Commission reserves the right to approve disposal on a conditional or unconditional basis.

### Radiation incidents, accidents and emergencies

Under the Regulations, these provisions apply to radiation emergencies, that is, radiation accidents in which control is either fully or partially lost, loss or theft of any apparatus and loss or theft of any substance with an activity in excess of certain specified amounts contained in the Regulations.

Generally, the procedures applying to these different incidents are similar. They define the scope of duty for workers engaged in activities

involving radiation and their employers in an accident or emergency and defines what preventive measures should be taken.

Specifically, such employers must maintain a register of radiation incidents. To be included in the register are the date, time and place of any incident, the length of time the source of radiation was temporarily out of control, the result of any investigation undertaken in respect of the incident, and the steps taken to minimise the possibility of future incidents. As concerns disposal operations, employers carrying out any operation involving the use, handling, storage or disposal of a substance are required to prepare a contingency plan. This plan must take into account every possible radiation accident or emergency that is reasonably foreseeable. It must also contain specific instructions as to the manner in which an accident or emergency should be dealt with, with an emphasis on control and minimisation of exposure to persons, and finally it must be incorporated into a radiation safety manual that is required to be kept by the employer.

### Schedules

The Schedules annexed to the Regulations are divided into eleven sections. Comprised of charts, forms and questionnaires, they provide information on the classification system of radionuclides, annual radiation dose equivalents pertaining to individual body organs and tissues, appropriate licensing and registration forms for radioactive substances and apparatus, etc

\*  
\* \*

The foregoing Ionizing Radiation Regulations of 1985, revoke the Radioactive Substances and Irradiating Apparatus Regulations, 1962, made under the Health Act of 1935, and the Ionizing Radiation (Radioactive Ores) Regulations, 1982, made under the 1982 Act.

The present Regulations have been modified on only minor points by another Regulation, made under the 1982 Act, which is known as Regulation 165 on Ionizing Radiation (Amendment I) of 1985.

### TRANSPORT OF RADIOACTIVE MATERIALS

#### Radiation Safety (Transport of Radioactive Substances) Regulations 1984 (South Australia)

The Radiation Safety (Transport of Radioactive Substances) Regulations (the "Regulations"), No. 27 of 1984, (published in the South Australian Government Gazette of 8th March 1984) took effect on 1st July 1984. They were made under the Radiation Protection and Control Act of 1982 (see Nuclear Law Bulletin No. 32), and contain requirements for transporting, packing, storing and stowing for transport of radioactive material in South Australia.

The provisions are based on the Australian Code of Practice for the Safe Transport of Radioactive Substances and the International Regulations for the Transport of Radioactive Materials published by the IAEA. Many of the



provisions amend, solely for national legislation, several sections of the International Regulations for the Transport of Radioactive Materials. However, these amendments are not extensive and generally clarify terminology or statistical computations. In particular they describe procedures to follow in case of packages lost or damaged during transport.

Under the Regulations, the South Australian Health Commission (the "Commission") and the consignor must be notified immediately when a package containing radioactive material is lost or wrongfully interfered with. The carrier must specify the time and place at which the incident occurred, as well as any foreseeable consequences.

As concerns procedures to be complied with in the case of an accident, the driver must notify the consignor and the Commission immediately. Details on the information to be reported to the consignor and the Commission are contained in the Regulations. In particular, the driver must try to prevent access to the vehicle or package as far as possible, except by persons authorised by the consignor or Commission. In the event a package is damaged, leaking or suspected of having leaked, the same procedures are to be applied.

The Regulations contain two Schedules. Schedule 1 refers to the paragraphs in the IAEA Regulations to be complied with by carriers, and Schedule 2 refers to the paragraphs in those Regulations to be complied with by consignors.

These Regulations were modified by Regulation No. 221 of 1984, published in the South Australian Government Gazette of 8th November 1984, the modifying Regulations, which were also made under the 1982 Act, amend only minor provisions of the principal Regulations.

## • *Belgium*

### RADIATION PROTECTION

#### 1985 Royal Order amending the General Regulations for Protection of the Population and Workers against the Hazards of Ionizing Radiation

This Royal Order of 21st August 1985 was published in the Belgian Official Gazette of 16th October 1985. Its purpose is to amend the Royal Order of 28th February 1963 enacting General Regulations for Protection of the Population and Workers against the Hazards of Ionizing Radiation.

The amendments aim to improve the prior licensing procedure for products containing radioisotopes to be used as unsealed sources in human or veterinary medicine for "in vivo" or "in vitro" diagnostic purposes and for therapy. They concern, in particular, the preparation of the licensing file, quality control procedures and the laboratories approved to perform such controls. The Ministerial Order of 13th April 1984 (see Nuclear Law Bulletin No. 34) which contained similar provisions is revoked.

In addition, the new Order authorises the sterilisation of medicaments by ionizing radiation, subject to conditions to be determined when such medicaments are registered.

Finally, the use of radioactive substances in lightning conductors is prohibited, subject to certain derogations for previously approved devices.

#### 1985 Order on the approval of devices containing radioactive substances

This Ministerial Order of 16th July 1985 which was published in the Belgian Official Gazette of 18th September 1985 amends the Ministerial Order of 24th April 1964 concerning the approval of certain devices containing radioactive substances. The 1964 Order was made in implementation of the General Regulations of 1963 (Section 3.1.d/2) mentioned above relating to radiation protection.

The amendments made by this new Order mainly concern information to be supplied in the context of the prior approval procedure and other related particulars.

#### THIRD PARTY LIABILITY

##### 1985 Act on nuclear third party liability

The Act of 22nd July 1985 on third party liability in the field of nuclear energy implements at national level the Paris Convention and the Brussels Supplementary Convention amended by the 1982 Protocols respectively.

The Act, which was published in the Belgian Official Gazette (Moniteur belge) of 31st August 1985, came into force ten days following its publication.

The text of the Act, together with a commentary, will be published in the next issue of the Bulletin.

## • *Canada*

#### REGIME OF NUCLEAR INSTALLATIONS

##### 1985 Atomic Energy Control Board Rules of Proceedings

In 1983, the Atomic Energy Control Board (AECB) issued Regulatory Document R-76 (see Nuclear Law Bulletin No. 33) allowing for participation by the

public in the regulatory activities of the AECB. Subsequently, the AECB adopted on 14th March 1985, the Rules Respecting the Proceedings of the AECB, which were published in the Canada Gazette on 6th April 1985 and which apply to any proceedings commenced by a person who is given an opportunity to be heard or to make representations pursuant to any regulations made by the Board.

Part I of the Rules lays down the procedure for the commencement of a proceeding as well as for any interrogations which the Board may direct to any party to the proceeding, the disclosure of information by the Board and the submission of written briefs which the Board may request.

Failure to comply with any of the Rules may result in postponement or other measure to be decided by the Board. The Board's final decision, as well as the reasons therefore, must be rendered in writing.

Part II pertains to any proceeding involving a hearing, including the composition of the panel before which the hearing is held, the location and the preliminary motions which may be brought by a party to the hearing.

A party to the hearing is entitled to legal representation, may call and examine witnesses, cross-examine with the approval of the Board, and may present argument on any matter in issue. Hearings are normally open to the public unless security or the disclosure of personal information within the meaning of the Privacy Act dictate otherwise.

The Board is not bound by the rules of evidence applicable in courts of law and may decide to receive as evidence any information, including rebuttal evidence that it considers of probative value. The Board is not required to make a transcript of the hearing.

## • *Denmark*

### NUCLEAR LEGISLATION

#### Parliamentary Resolution of 29th March 1985 on Public Energy Planning in Denmark

On 29th March 1985, the Danish Parliament prescribed the Government to organise public energy planning on the precondition that nuclear power will not be used in Denmark. As a consequence, Parliament instructed the Government on 30th April 1985 to release the sites reserved for nuclear power plants (See Circular of 6th August 1980 on the reservation of sites for nuclear power plants - Nuclear Law Bulletin No. 27.)

## • *France*

### REGIME OF NUCLEAR INSTALLATIONS

#### Decree of 23rd April 1985 implementing for major nuclear installations the 1983 Act on democratisation of public inquiries

Act No. 83-630 of 19th July 1983 on democratisation of public inquiries and environmental protection prescribes a public inquiry procedure for work likely to affect the environment (see Nuclear Law Bulletin No 32) This Decree, No. 85-449, was published in the Official Gazette on 24th April 1985 It is included in a series of decrees, not all involving nuclear activities, made in implementation of the Act.

The scope of this Decree is set out in an annexed table which provides that this new procedure applies to major nuclear installations governed by Decree No. 63-1128 of 11th December 1963 on nuclear installations and their radioactive effluent releases; however, there are many exceptions to this rule (provisional installations, mobile nuclear installations, major nuclear installations to be constructed in a series, major nuclear installations involving national defence).

The definition of a major nuclear installation which, until now, was set out in orders, is henceforth included in the 1963 Decree which is amended by the above Decree.

As regards substance, the main modifications concerning nuclear installations are those directly resulting from the Act of 12th July 1983 one month's duration at least for the inquiry, designation of an inquiry commissioner (commissaire enquêteur) by the president of the administrative court, stay of execution decided ipso facto by the judicial authority in case of the inquiry commissioner's negative opinion.

#### Decree of 23rd April 1985 made in implementation of the 1983 Act on democratisation of public inquiries

Decree No. 85-453 (published in the Official Gazette of 24th April 1985) is the essential instrument for the entry into force of the Act of 1983 It sets out in annex the list of activities which must be preceded by a public inquiry in accordance with the Act, and giving the public greater possibilities for intervening in the procedure as well as guarantees on the independence of inquiry Commissioners.

Nuclear activities are referred to under three headings

- installations classified for environmental protection purposes provided they are subject to licensing,
- major nuclear installations governed by the Decree of 11th December 1963, as well as their gaseous effluents,

- research and exploitation of ores other than hydrocarbons.

#### Circular of 27th September 1985 on Decrees made in implementation of the 1983 Act

This Circular (published in the Official Gazette of 28th September 1985) defines the workings of the various Decrees made in implementation of the 1983 Act on democratisation of public inquiries as follows:

- Decree No. 85-453 which is the general decree for the mechanism set up: it defines the scope of the Act;
- three other Decrees which deal respectively with amendment of the provisions made in implementation of the Mining Code (No. 85-448); major nuclear installations (No. 85-449) and secrecy protection for purposes of national defence (No. 85-693);
- the overall purpose of the Decrees is to insert new provisions on public inquiries in existing procedures and adapt the planned conditions to the specifics of certain categories of operations;
- the Circular then specifies the scope of application of the Act of 12th July 1983 as well as certain conditions for the organisation and development of the inquiry.

#### ENVIRONMENTAL PROTECTION

##### 1985 Act amending the 1976 Act on installations classified for environmental protection purposes

Act No. 85-661 of 3rd July 1985 (published in the Official Gazette of 4th July 1985) both amends and supplements Act No. 76-663 of 19th July 1976 on installations classified for environmental protection purposes (see Nuclear Law Bulletin No. 18).

The new provisions increase the penalties prescribed in cases where classified installations are operated in illegal conditions.

Increased fines and terms of imprisonment are laid down for operating an installation without a licence. In addition, courts may now include in their sentence prohibition of the use of the installation; and may order it to be put back in good condition, in which case the penalty may be postponed until termination of the period fixed for the work.

## FOOD IRRADIATION

### 1985 Order on treatment by ionizing radiation of gum-arabic, dehydrated vegetables and cereal flakes and seeds

The Order of 17th May 1985 (published in the Official Gazette of 16th June 1985) fixes the licensing conditions for the sale of gum-arabic, dehydrated vegetables and cereal flakes and seeds for use in dairy products, whose microbial decontamination was obtained through exposure to cobalt 60 or caesium 137 gamma-rays or electron beams with an energy below or equal to 10 Mev.

## • *F.R. of Germany*

### NUCLEAR LEGISLATION

#### Revision of Atomic Energy Act (1985)

It is recalled that the Atomic Energy Act of 23rd December 1959 was amended by an Act of 22nd May 1985 for the purpose of introducing in German legislation the concept of the nuclear operator's unlimited liability (see Nuclear Law Bulletin No. 35).

In view of the significance of this change and given that a series of amendments have been made since 1976 (see Supplement to Nuclear Law Bulletin No. 18) by the Acts of 3rd December 1976, 28th March 1980 and 20th August 1980 respectively, it was decided to publish anew the text of the Act, as revised. This text is reproduced in the Supplement to this issue of the Bulletin.

### REGIME OF NUCLEAR INSTALLATIONS

#### 1985 Act to expedite administrative court procedures

An Act of 4th July 1985, to expedite administrative court procedures, including procedures in connection with the licensing of nuclear installations was adopted by Parliament. The Act provides that the Administrative Courts of Appeal (Oberverwaltungsgerichte) have original jurisdiction over lawsuits concerning the licensing of nuclear installations (including State repositories for radioactive waste) and of the use and the possession of nuclear fuels (Bundesgesetzblatt 1985 I p. 1274).

## TRANSPORT OF RADIOACTIVE MATERIALS

### 1985 Ordinances concerning the transport of dangerous goods by road and by rail

Amended versions of 22nd July 1985, of the Ordinance of 29th June 1983 on domestic and international transport of dangerous goods by road and the equivalent Ordinance of 22nd June 1983 on transport by rail have been published in Bundesgesetzblatt 1985 I p. 1550 and p. 1560.

## • *Iceland*

### RADIATION PROTECTION

#### 1982 Act to amend the Act of 1962 on protective measures against ionizing radiation

Act No. 58 of 14th May 1982 (published in the Official Gazette of 24th May 1982, Part A, No. 15) amends Act No. 95 of 20th December 1962 on protective measures against ionizing radiation from radioactive substances or radiation-generating apparatus. The amendment provides that the competent Minister, on recommendation of the medical officer of health will specify the provisions in the Act which shall also apply to apparatus emitting non-ionizing radiation. [This Note is based on a summary of the Regulations published in the International Digest of Health Legislation, World Health Organisation, 1985, 36(1).]

## • *Italy*

### REGIME OF NUCLEAR INSTALLATIONS

#### 1984 Act on provisional "clearance certificates" for activities subject to fire prevention controls

Act No. 818 of 7th December 1984 (published in the Official Gazette of 10th December 1984) deals with activities, also in the nuclear sector, subject to inspection by the Provincial Fire Service for fire prevention purposes.

The Act and its implementing Decrees provide for the qualification of laboratories, centres, experts, etc. entitled to deliver fire prevention certificates. A provisional clearance certificate may be obtained for three years at most.

The Act applies to facilities and activities listed in a 1965 Decree, amended by a Decree of 1982, as requiring fire prevention controls (see Nuclear Law Bulletin No. 29).

## • *Lebanon*

### RADIATION PROTECTION

#### 1983 Decree on the use of ionizing radiation and protection against its effects

Decree No. 105 of 16th September 1983 on the use of ionizing radiation and protection against its effects was published in the Official Gazette of 3rd November 1983, No. 44.

The Decree defines a series of Arabic terms, giving their French equivalent, eg. ionizing radiation, radioactive substances, sealed and unsealed sources, maximum permissible dose equivalent, etc. All activities involving radioactive substances and ionizing radiation must be licenced in advance by the Minister of Public Health. [This Note is based on a summary of the Regulations published in the International Digest of Health Legislation, World Health Organisation, 1985, 36(1).]

## • *Spain*

### ORGANISATION AND STRUCTURE

#### 1985 Royal Decree amending the Decree on the reorganisation of activities in the nuclear fuel cycle

Royal Decree No. 1611/1985 of 17th July 1985 was published in Official Gazette No. 218 of 11th September 1985. It amends certain provisions of the Royal Decree of 7th December 1979 concerning the reorganisation of activities in the nuclear fuel cycle in Spain (see Nuclear Law Bulletin No. 25).



Based on the directives given in the National Energy Plan of 1983, the Decree provides that the National Uranium Undertaking (ENUSA) which must constitute a stockpile of nuclear fuels to meet the needs of Spanish nuclear power plants, should now keep a lower stock. Therefore, the contingency stock is to be reduced progressively and a so-called operating stock is to be kept by ENUSA. In addition, the safety stocks of uranium concentrates and uranium enrichment services ensured by ENUSA will be eliminated and replaced by safety stocks of fuel elements in operating power plants to guarantee them a measure of autonomy. The standard contract between ENUSA and power plant owners will consequently have to be amended. This reorganisation should take place by 1st July 1988.

## • *Sweden*

### RADIATION PROTECTION

#### 1983 Regulations amending a 1977 Regulation on the limitation of emissions of radioactive substances from nuclear installations

Regulation No. 5 of 19th September 1983 (SSI FS 1985:5), made by the State Institute for Radiation Protection amends Regulation No. 2 of 1977 (SSI FS 1977.2) limiting radioactive releases from nuclear installations to the environment.

These Regulations apply to normal operations in nuclear power plants, installations for fuel storage and for waste treatment and in waste storage facilities. This includes fuel storage and handling, loading, start-up, trial operations, commercial operations, shut-down, maintenance, surveillance, etc. Handling and storage of spent fuel and low - and medium - level waste are also covered by the Regulations.

The Regulations lay down the conditions for discharges into air and water of radioactive substances of any kind originating in a nuclear installation. Procedures are prescribed for measuring discharges into air and water. Discharges must be recorded and regular reports submitted to the State Institute for Radiation Protection regarding such discharges; also, any increase in discharges must be notified.

Persons in charge of nuclear installations are required to prepare appropriate documentation for the calculation of the quantitative relationship between radioactive discharges and dose equivalents and must submit such documents for approval by the Institute.

Finally, before a reactor is loaded or another facility is operated within a nuclear installation, investigation of the adjacent zones and meteorological studies must be carried out to assess the radiation when the plant becomes operational. [This Note is based on a summary of the Regulations published in the International Digest of Health Legislation, World Health Organisation, 1985, 36(1).]

## • *Switzerland*

### NUCLEAR LEGISLATION

#### Ordinance on fees in the nuclear field (1985)

On 30th September 1985, the Federal Council (Government) adopted an Ordinance on fees in the nuclear field. This Ordinance came into force on 1st October 1985.

In accordance with the Atomic Energy Act [Section 37(3)], the Federal Council fixes the scale of fees levied for delivering licences and performing controls. Although there had been no Ordinance in this respect to date, operators of Swiss nuclear power plants have, since 1971, paid each year the expenses incurred by the Federal control authorities which resulted from construction and operation of such facilities.

The new Ordinance specifically defines the activities subject to fees and fixes the criteria for calculating the scale. There are two types of fees, those levied by the Federal Energy Office which concern the various licences delivered in accordance with nuclear legislation, and also those levied for conducting prior studies to determine whether and on what conditions a licence could be granted. In this case, the fees are fixed according to the extent of the Federal Energy Office's involvement, within the limits set by the Ordinance. The Ordinance also deals with the involvement of the Principal Nuclear Safety Division (DSN), the Nuclear Technology and Security Section (SNS) (for third party matters) and the Federal Commission for the Safety of Nuclear Installations (CSA). This concerns both expertise for projects and surveillance over nuclear installations, eg: study of scientific and technological developments. Fees are calculated pro rata temporis according to the average cost of a unit, including work stations.

The Ordinance's general provisions concern customary concepts and current legal institutions in Swiss legislation regarding fees.

## • *Turkey*

### RADIATION PROTECTION

#### 1985 Decree on Radiation Safety Regulation

The Radiation Safety Regulation, Decree No. 85/9727 dated 24th July 1985, and published in the Official Gazette, took effect on 7th September 1985. This Decree revises Decree No. 7/9038 of 30th November 1974 (see

Nuclear Law Bulletin No. 17) and has been prepared on the basis of Recommendation No. 26 of the International Commission on Radiological Protection (ICRP).

The purpose of the Regulation is to provide protection for persons against ionizing radiations arising from the medical, industrial, research and other applications of nuclear energy. According to its provisions, all persons and establishments which keep, use, produce or store radioactive materials and radiation sources must obtain a licence from the Turkish Atomic Energy Authority (TAEA).

In addition, the import, export and transportation of all radioactive materials must be approved by TAEA and a valid permit issued by TAEA must be presented to customs authorities for all importation and exportation.

The Regulation also stipulates the procedures for inspections at working places, for the management of low level waste, as well as registration procedures and training requirements for personnel in the radiation protection field. The responsibilities of the entities which use radioisotopes and radiation sources are also laid down by the provisions of the Regulation.

## • *United Kingdom*

### RADIATION PROTECTION

#### The Ionizing Radiation Regulations 1985

The Ionizing Radiation Regulations 1985 (Statutory Instrument 1985 No. 1333) were made on 23rd August 1985 and came into operation on 1st October 1985 as regards the appointment of radiation protection advisers and qualified persons, the Regulations will come into force for all other purposes on 1st January 1986.

These Regulations implement as regards Great Britain the provisions of the Council of the European Communities' Directive 80/836 Euratom, amended by Council Directive 84/467, laying down the basic safety standards for the health protection of the general public and workers against the dangers of ionizing radiation (see Nuclear Law Bulletin Nos. 26 and 34).

The Regulations impose duties on employers to protect employees and other persons against ionizing radiation arising from work with radioactive substances and other sources of ionizing radiation and also impose certain duties on employees.

The Regulations require every employer to take all necessary steps to restrict so far as is reasonably practicable the extent to which employees and other persons are exposed to ionizing radiation, and impose limits on the

doses of ionizing radiation which employees and other persons may receive in any calendar year. Employers are, with certain exceptions, required to notify the Health and Safety Executive of work with ionizing radiation.

Employers are also required to appoint radiation protection advisers and supervisors, to make local rules for the conduct of work with ionizing radiation, to ensure that such work is properly supervised and that adequate information, instruction and training is given to employees and other persons

It is provided that areas in which persons are likely to receive more than specified doses of ionizing radiation be designated as controlled areas or supervised areas and entry into controlled areas be restricted to specified persons and circumstances. Employees who are likely to receive more than specified doses of ionizing radiation are required to be designated as classified persons. Radiation levels must be monitored in controlled and supervised areas.

Doses of ionizing radiation received by classified and certain other specified persons must be assessed by one or more dosimetry services approved by the Health and Safety Executive and records of such doses must be made and kept for each such person.

The Regulations also require certain employees to be subject to medical surveillance and provide for the Executive to require employers to make approved arrangements for the protection of the health of any individual employee.

Where a radioactive substance is used as a source of ionizing radiation, it should whenever reasonably practicable, be in the form of a sealed source and any articles embodying or containing radioactive substances must be suitably designed, constructed, maintained and tested. The Regulations also cover the accounting for, keeping and transport of radioactive substances.

The Regulations require every employer who undertakes work with ionizing radiation to make an assessment of the hazards that are likely to arise from that work and, in cases where more than specified quantities of radioactive substances are involved in the work, to send an assessment report to the Health and Safety Executive. In certain circumstances, employers must make contingency plans for dealing with foreseeable incidents.

Any cases in which an employee has received an overexposure must be investigated and notified to the Executive and investigations must be made where employees are exposed above specified levels. It is also required that incidents in which more than specified quantities of radioactive substances escape or are lost or stolen be notified to the Executive.

The Regulations impose duties on manufacturers etc. and installers of articles for use in work with ionizing radiation to ensure that such articles are designed, constructed and installed so as to restrict so far as is reasonably practicable exposure to ionizing radiation. Similar duties are imposed on employers in relation to equipment used for medical exposures

Employers are also required to investigate any defect in medical equipment which may have resulted in a person undergoing a medical exposure

receiving a much greater dose of ionizing radiation than was intended. The Executive must be notified of a confirmed incident.

Interference with sources of ionizing radiation is prohibited.

The Schedules specify, inter alia, dose limits, work exempted from notification, particulars to be supplied in a notification, designation of controlled areas etc.

The 1985 Regulations supersede and revoke the Ionizing Radiations (Unsealed Radioactive Substances) Regulations 1968, the Ionizing Radiations (Sealed Sources) Regulations 1969 and the Radioactive Substances (Road Transport Workers)(Great Britain) Regulations 1970.

### 1985 Code of practice for the protection of persons against ionizing radiation arising from any work activity

This Code of Practice has been drawn up following widespread consultation with interested parties and, in particular, in consultation with the Health and Safety Commission's technical working party on proposed legislative requirements for radiological protection. The National Radiological Protection Board has also been consulted and its advice is incorporated in the Code of Practice.

The Code has been approved by the Health and Safety Commission for the purpose of providing practical guidance with respect to the provisions of the Ionizing Radiations Regulations 1985 (see above). The provisions of the Code represent, in the opinion of the Health and Safety Commission, the most appropriate methods of complying with the regulatory requirements and, in particular, the methods which should be considered to be reasonably practicable when that term appears in the Regulations. The Code applies to all work activities covered by the Regulations. Part 1 of the Code gives general guidance on all the Regulations for which it is currently recognised that such guidance is necessary. Part 2 is divided into sections which relate to specific work activities.

Although failure to comply with any provision of the Code is not in itself an offence, such a failure may be used in criminal proceedings as evidence that a person has contravened a Regulation to which the provision relates.

### REGIME OF RADIOACTIVE MATERIALS

#### 1985 orders exempting certain radioactive devices under the 1960 Radioactive Substances Act

Three Orders were made on 8th July 1985 and came into operation on 17th September 1985: the Radioactive Substances (Gaseous Tritium Light Devices) Exemption Order 1985 (SI 1985 No. 1047), the Radioactive Substances (Luminous Articles) Exemption Order 1985 (SI 1985 No. 1048) and the Radio-

active Substances (Testing Instruments) Exemption Order 1985 (SI 1985 No. 1049).

All three Orders extend to England, Scotland and Wales and are concerned with exemptions and exclusions under the Radioactive Substances Act 1960 as regards articles containing tritium gas, radioactive luminous instruments and indicators and testing instruments, as well as radioactive sources used in conjunction with such instruments, respectively.

SI 1985 No. 1048 revokes the Radioactive Substances (Luminous Articles) Exemption Order 1962 and the Radioactive Substances (Luminous Articles) Exemption (Scotland) Order 1962, while SI 1985 No. 1049 revokes the Radioactive Substances (Testing Instruments) Exemption Order 1962 and the Radioactive Substances (Testing Instruments) Exemption (Scotland) Order 1962.

## • *United States*

### REGIME OF NUCLEAR INSTALLATIONS

#### NRC publishes final hybrid hearing procedures (1985)

On 15th October 1985, the Nuclear Regulatory Commission published final procedures for so-called hybrid hearings in proceedings to licence the expansion of spent fuel storage capacity at reactor sites and the transshipment of spent fuel to reactor sites for the purpose of interim storage (50 CFR 41662). Under Section 134 of the Nuclear Waste Policy Act of 1982, the Commission is authorised to use modified hearing procedures for such proceedings at the request of any party. The hybrid hearing process consists of an informal first stage (oral argument) followed by a formal adjudicatory hearing, if required, on genuine and substantial issues of fact. The oral argument is designed to identify whether there are any issues requiring resolution in an adjudicatory hearing.

The new procedures limit the issues that may be designated for formal adjudication. The presiding officer must find, based on the parties' sworn written submissions, that there is a genuine and substantial dispute of fact that can only be resolved with sufficient accuracy by the introduction of evidence in an adjudicatory hearing and that the decision of the Commission is likely to depend on the resolution of that dispute. Issues that were or could have been heard in a prior licensing proceeding may not be relitigated unless the presiding officer finds that the design, construction, or operation of the facility will be affected and the Commission has subsequently revised its siting or design criteria. The procedures also restrict the time available for discovery before oral argument. The hybrid procedures are intended to encourage and expedite the licensing of spent fuel storage capacity expansions and transshipments.

### NRC publishes final rule revising backfitting process for power reactors (1985)

On 20th September 1985, the Nuclear Regulatory Commission published its final revision to the backfitting rule for power reactors (50 CFR 38097). The revision establishes standards and an agency discipline for future management of the backfitting process. Backfitting is defined in the rule as the modification of or addition to systems, structures, components, or design of a facility; or the procedures or organisation required to design, construct, or operate a facility, which may result from a new or amended provision in the Commission's rules or the imposition of a new or different regulatory staff position interpreting those rules. The rule applies to backfits imposed according to the following schedules: (1) after the date of issuance of a construction permit, for facilities with construction permits issued after 21st October 1985, (2) six months before docketing of an operating licence application, for facilities with construction permits issued before 21st October 1985, (3) after the date of issuance of an operating licence, for facilities with operating licences; or (4) after the date of issuance of a standardised design approval.

The rule requires a systematic and documented analysis before a backfit may be imposed. The backfit must provide a substantial increase in the overall protection of the public health and safety or the common defence and security. The direct and indirect costs of implementation must be justified in view of this increased protection. Factors to be considered include the objectives of the backfit, actions required in order to complete it, potential change in the risk of accidental offsite release of radioactive material, costs, potential safety impact of changes in plant or operational complexity, and the potential impact of differences in facility design, type or age. The rule does not apply and a backfit analysis is not required when a modification is necessary to bring a facility into compliance with the licence or regulations, or when an immediately effective regulatory action is needed to ensure that the facility presents no undue risk to the public health and safety.

### NRC issues policy statement on severe reactor accidents (1985)

On 8th August 1985, the NRC published a policy statement on severe reactor accidents applicable to future designs and existing plants. The policy concerns accidents involving substantial damage to the reactor core regardless of whether there are serious offsite consequences. Its main focus is on the criteria and procedures the Commission intends to use to certify new standard designs. For new applications or designs, the following must be demonstrated: (1) compliance with all existing procedural requirements and criteria of current Commission regulations, including the Three Mile Island requirements for new plants, (2) demonstration of technical resolution of all applicable unresolved safety issues and the medium- and high-priority generic safety issues, with special focus on the reliability of decay heat removal systems and electrical supply systems; (3) completion of a probabilistic risk assessment, and (4) completion of a staff review of the design for safety using deterministic engineering analysis and judgment complemented by probabilistic risk assessment.

The Commission concluded that existing reactors pose no undue risk to public health and safety and that there is no present basis for immediate action on generic rulemaking or other regulatory changes for these plants

because of severe accident risk. The Commission stated that it would continue its ongoing programmes for resolution of unresolved safety issues and other generic safety issues, severe accident research and source term, evaluation of operating experience and abnormal events; and inspection of plant construction, operation, and maintenance. The Commission also noted its plans to define a method of analysis and a systematic approach for the use of plant-specific probabilistic risk assessments for plants now operating or under construction.

## • *Yugoslavia*

### NUCLEAR LEGISLATION

#### 1984 Act on Radiation Protection and the Safe Use of Nuclear Energy

A note on the above Act was published in Nuclear Law Bulletin No 35 of June 1985. As announced at the time, an unofficial translation of the Act is reproduced in the Supplement to this issue of the Bulletin.

### TRANSPORT OF RADIOACTIVE MATERIALS

#### 1984 Act on the Transport of Dangerous Materials

The Act of 18th April 1984 on the Transport of Dangerous Materials entered into force on 28th April 1984 (published in the Official Gazette of the SFRY No. 20/84) and replaces the former Act of 1974 on the same subject

The 1984 Act lists and describes fourteen groups of dangerous materials within its scope, including radioactive materials. It prescribes safety requirements common to all groups of hazardous materials, concerning packaging, loading, unloading and carriage. Special safety measures with regard to the different groups of materials and particular modes of transport are also dealt with. Finally, the 1984 Act contains provisions on compliance assurance and penal sanctions.

Yugoslavia is a federative State. This has to be taken into account when analysing the legal regime applicable to the transport of radioactive materials, i.e. the distribution of the legislative, licensing and controlling competences in the country. According to the 1974 Constitution of the Socialist Federative Republic of Yugoslavia (SFRY), the Federation regulates the trade and transport ". . . of radioactive and other dangerous materials when this is of importance for the entire State . . .". Consequently, also the federal units, i.e. the Republics and Autonomous Provinces are authorised to pass regulations on the transport of dangerous materials. However, until



now the most important regulatory activities concerning the transport of radioactive materials have been carried out within the framework of federal legislation. The licensing and control of such transport are described below.

**Licensing:** According to the 1984 Act, the transport of radioactive materials, irrespective of the mode of transport, generally requires a licence. Due to the federal structure of the State, competence for licensing is divided between the federal authorities and the authorities of the constituent Republics or Provinces respectively. In principle, a licence is granted by the latter, taking into account the territory from which a consignment is despatched. This rule is valid for shipments which do not cross the Yugoslav frontier. In the case of transports crossing that frontier, the competent licensing authority is the Federal Committee of Labour, Health and Social Welfare in agreement with the Federal Secretariat of the Interior. The application for a licence to be submitted by the consignor must comply with a number of requirements. No transport licence is required for radioactive materials being transported for the armed forces and under military protection.

**Compliance assurance:** Here competence is shared between the federal and republican or provincial bodies as described above regarding licensing. For national transport, the supervisory authorities are the administrative bodies in the Republics or Autonomous Provinces where a shipment takes place. For international transport the above-mentioned Federal Committee ensures compliance with the regulations.

**Modes of transport:** As regards the different modes of transport, the 1984 Act refers to international agreements concerning the transport of hazardous materials. Federal bodies are also authorised to pass detailed regulations for each mode of transport. These provisions are briefly described below.

**Road** In addition to the provisions of the 1984 Act for both international and national transport the provisions of the ADR (European Agreement concerning the International Carriage of Dangerous Goods by Road) ratified by Yugoslavia must be applied. The Federal Secretariat of the Interior is responsible for issuing detailed regulations for this mode of transport.

**Rail** Here the 1984 Act expressly refers to the provisions of the International Regulations concerning the Carriage of Dangerous Goods by Rail (RID). Yugoslavia recently ratified the International Convention concerning the Carriage of Goods by Rail (CIM).

**Inland waterway:** For this mode of transport of dangerous materials the 1984 Act prescribes an "analogous" application of the International Convention for the Safety of Life at Sea (SOLAS). Yugoslavia has ratified the 1974 version and the 1978 Protocol. The Federal Committee of Traffic and Communications is authorised to adopt additional regulations concerning the mode of shipment for dangerous materials by inland waterway. The Yugoslav ships' register contains technical regulations concerning the technical suitability of vessels designed for carrying dangerous materials.

**Sea:** The SOLAS Convention must be applied directly. Technical norms, issued by the Yugoslav ships' register must be in conformity with, among others, the International Maritime Dangerous Goods Code (IMO Code).

Air: The 1984 Act refers to the Dangerous Goods Annex (No. 18) to the Chicago Convention together with its Technical Instructions. The competent authority for issuing additional regulations is the Federal Committee of Traffic and Communications.

Post: In principle, the 1984 Act forbids the mailing of dangerous materials. There is one exception to this rule: dangerous materials, whose international transport by post is authorised according to the Universal Postal Convention and the Arrangement on Post Parcels, may be accepted for transport by post also within the territory of Yugoslavia.

# CASE LAW AND ADMINISTRATIVE DECISIONS

## CASE LAW

### • *United States*

#### CHALLENGE TO AGREEMENTS FOR CO-OPERATION CONCERNING PEACEFUL USES OF NUCLEAR ENERGY

On 20th June 1985, the United States District Court for the District of Columbia dismissed an action by some members of Congress and several self-described public interest organisations brought against federal government officials. Plaintiffs sought a judicial determination that provisions of the agreement for co-operation between the United States and Sweden and the revised agreement for co-operation between the United States and Norway violated provisions of the Atomic Energy Act, as amended by the Nuclear Non-Proliferation Act of 1978. The basis of their complaint was that the agreements granted the prior consent of the United States to the transfer by Sweden and Norway of spent fuel (supplied by the United States) for reprocessing at facilities in the United Kingdom and France. Plaintiffs further sought an injunction to require the United States Secretaries of State and Energy to review all such transfers on a case by case basis as required in principal by the 1978 Act.

The Court granted the Defendants' (the Government) motion to dismiss on the grounds that the case presented a nonjusticiable political question. The Court also held that the conclusion of an international agreement is an action that requires the government to be able to speak with a "single voice". The Court observed that the Sweden and Norway agreements had been subject to congressional review, and yet, no congressional opposition had been expressed. The Court was persuaded by the Defendants' argument that an about-face on the advance consent issue would damage United States credibility and undermine its efforts in favour of non-proliferation policies.

# ADMINISTRATIVE DECISIONS

## • *Switzerland*

### KAISERAUGST NUCLEAR POWER PLANT PROJECT - GENERAL LICENCE (1985)

On 28th October 1981 the Federal Council (Government) had granted the Kaiseraugst Nuclear Power Plant Company Ltd the general licence for construction of 900 to 1,000 MWe nuclear power plant at Kaiseraugst in the Canton of Aargau near Basle (see Nuclear Law Bulletin No. 29). In accordance with the Federal Order of 6th October 1978 concerning the Atomic Energy Act, this decision to grant a licence must be approved by Parliament (see Nuclear Law Bulletin No. 23). On 2nd February 1983, the Council of States (Higher House) had approved the Government's decision (see Nuclear Law Bulletin No. 34). The National Council (Second House of Parliament) granted its approval on 20th March 1985 and therefore, the licence delivered by the Federal Council has now entered into force.

The Company promoting the project may now plan continuation of the procedure and must obtain the construction licence before beginning the construction work for the plant.

### URANIUM STORAGE FACILITY AT WÜRENLINGEN (1985)

The Kaiseraugst Company Ltd wishes to store at the Federal Institute for Reactor Research (IFR) at Würenlingen, up to 200 tons of enriched uranium in the form of uranium hexafluoride. Under the Federal Order of 6th October 1978 concerning the Atomic Energy Act, a general licence is required for this project.

The Federal Order provides that the general licence determines the site and general outline of the project. In this respect, the general outline includes the type of material stored and the capacity of the storage facility. In addition, a general licence is granted only on condition the facility responds to an effective need in the country.

An application dated 6th June 1981 was published and submitted for ninety days for consultation by the population. In that time, 1,182 persons lodged objections. The federal departments and each of the Cantons were consulted. Twenty-six interested communes also expressed their opinion. Furthermore, a request was made for the expert opinion of the Principal Division for the Safety of Nuclear Installations (DSN), the Federal Commission for the Safety of Nuclear Installations (CSA) and the Federal Commission for Energy (CFE). In accordance with the prescribed procedure, the conclusions of

the views and expert opinions were published and the full texts made available to the public for a further period of ninety days during which objections could be lodged by all, however since no objection was considered admissible, the second stage in the procedure was not pursued.

Following perusal of the opinions and objections expressed during the procedure, and on the basis of the different expert reports, the Federal Council concluded that the project met the conditions required. On 22nd May 1985 the Council decided to grant the general licence, subject to parliamentary approval and to certain conditions. The general licence is valid for three years from its entry into force. This period corresponds to submission of the application for the operating licence.

#### GEOLOGICAL INVESTIGATIONS IN THE CANTONS OF VAUD, URI AND GRAUBUNDEN - FEDERAL COUNCIL DECISION (1985)

On 22nd December 1983, the National Corporation for the Disposal of Radioactive Waste (CEDRA) submitted three licensing applications for preparatory measures for constructing a repository for low- and medium-level radioactive waste. The licences concern the conduct of a wide geological and geotechnical research programme, which includes excavating galleries for probes and test caves. The work is to be carried out on three sites located in the Cantons of Vaud, Uri and Graubunden (Grisons) respectively.

In accordance with the Ordinance of 24th October 1979 (see Nuclear Law Bulletin No. 28), the applications were published in the Federal Gazette and submitted (with their annexes) to public inquiry. Almost 3,000 objections were lodged within the time-limit allowed.

In parallel with the inquiry process, consultations on the applications were held with the Cantons concerned and the Federal departments directly involved. At the end of 1984, the arguments of the adverse parties and the notifications of the three Cantons were put together in a report published by the Federal Energy Office (OFEN). CEDRA's response to the adverse parties was then submitted to public inquiry in the communes. The interested parties were invited in writing to express their view anew. In autumn 1984, the Head of the Federal Department of Transport, Communications and Energy (DFTCE) visited the Cantons of Vaud, Uri and Graubunden to obtain the opinion of the representatives of the Cantonal and communal authorities. Based on numerous data, OFEN prepared the Federal Council's decisions in close collaboration with other federal departments, in particular the Federal Office for Environmental Protection.

Following the Federal Council's decisions on CEDRA's applications, licences were granted for a geological and geotechnical investigations programme on the three selected sites. The work will include probings and geophysical studies. On the other hand, the decision on excavating probe galleries and related research has been postponed. It will be made once the results of presently licenced preparatory measures are known and when CEDRA will submit an application for preparatory measures on at least one other additional site. Such application must concern a fundamentally different position, in particular, the area of the repository envisaged should be located clearly below the bottom of the valley.

The Federal Council has attached conditions and fees to the licences, the work being subject to control by the surveillance authorities. The licences are valid for a period of ten years.

#### EXTENSION OF THE PERIOD FOR THE "GARANTIE 1985 PROJECT"

Licences to operate Swiss nuclear power plants contain a provision whereby such licences will lapse if, by 31st December 1985 no project has been set up guaranteeing that safe disposal and final storage of the radioactive waste produced by the plants is possible. In January 1985 the National Corporation for the Disposal of Radioactive Waste (CEDRA), commissioned by the nuclear power plant operators, submitted to the Federal Council a report entitled "Garantie 1985 Project" stating that this possibility can be demonstrated (see Nuclear Law Bulletin No. 35). The federal authorities are presently studying this report. This task is performed by the nuclear safety authorities, i.e. the Principal Division for the Safety of Nuclear Installations (DSN) and the Federal Commission for the Safety of Nuclear Installations (CSA).

In addition, the Confederation's Interdepartmental Working Group responsible for supervising radioactive waste management work (AGNEB) will have to prepare for the Federal Council a preliminary opinion regarding the CEDRA project. Swiss and foreign experts, including members of the AGNEB geological sub-group, have been called upon to study specific aspects. Thus, over twenty specialists (some from the United Kingdom, Canada, Sweden and the United States) are taking part in this work.

Assessment of the project will concentrate on geology, tectonics, hydrogeology, geochemistry, container technology and the properties of bentonite. This is a complex task, requiring much time. Accordingly, so as to avoid compromising its exhaustive and scientific character, the Federal Council has decided to extend the period required for establishing such "guarantee" until it is in a position to decide on the content of the report. This decision, solely designed to ensure that work will be conducted scrupulously, does not prejudice the value of the project in any way. Licences to operate nuclear power plants will remain in force until this phase of the work is achieved. The Federal Council will then decide on the validity of the licences.

# INTERNATIONAL ORGANISATIONS AND AGREEMENTS

## INTERNATIONAL ORGANISATIONS

### • *The OECD Nuclear Energy Agency*

#### HIGHLIGHTS IN THE NEA PROGRAMME OF WORK (1985)

Several meetings sponsored by NEA in the past months merit attention because, although not legal in nature, their conclusions will have a bearing on regulatory developments in Member Countries. The conclusions of the meetings are summarised below.

#### Seminar on Interface Questions in Nuclear Health and Safety

From 16th to 18th April 1985, this Seminar brought together for the first time in a formal setting, high level representatives from some twenty OECD countries in the fields of radiation protection, nuclear safety and radioactive waste management, for the purpose of opening a dialogue across traditional disciplinary lines and reconciling theory and practice.

Specific portions of the debate were devoted to the improvement of capabilities to conduct risk assessments in order to provide optimal protection for present and future generations. Opinions were presented on the need for integrating both the quantitative and qualitative factors in risk assessments, the use of various techniques to assist in national decision-making for technological issues with health and safety implications and the problems associated with the long-term assessment and management of hazards from radioactive waste. The final panel discussion underscored the recognition by the nuclear health and safety community of the need to broaden its perspective by better integrating all the relevant interests and requirements.

## High Level Workshop on Nuclear Energy Prospects to 2000 and Beyond

From 5th to 7th November 1985, the OECD Nuclear Energy Agency (NEA) and the International Energy Agency (IEA) organised a High Level Workshop on Nuclear Energy Prospects to 2000 and Beyond, attended by experts from government and industry.

It emerged from the discussions that the outlook for nuclear energy in OECD countries is encouraging in spite of expected slow growth of total energy demand and problems of public acceptance of nuclear power in some countries. Nuclear generated electricity has multiplied by 3.5 in the past ten years and has displaced a great deal of oil-fired power which has dropped in market share from 24 per cent in 1974 to less than 11 per cent in 1984.

In spite of a subsequent slowdown in the commitment of new plants, and cancellation of some earlier orders, nuclear electricity production is expected to approximately double by the end of the century and by then to supply over 26 per cent of OECD electricity. This increase in supply is expected in part from higher operating efficiencies of existing plants and in part from new plants planned or currently under construction. Moderate growth rates are also expected to continue beyond the turn of the century. For planning purposes an expansion in installed nuclear capacity from 1.5 to 3 times should be expected between 2000 and 2025.

It was found that technical questions relating to the safe operation of nuclear plants have now been largely resolved, but there is always scope for improvements and continued research. The current generation of power plants should continue to evolve by way of simplification and standardisation of design, better utilisation of fuel material, development of even more economical fuel cycle technologies, streamlining of operational procedures and processes and reduction of construction lead-times.

Addressing the question of nuclear waste, the experts concluded that, although not a technical problem, its safe disposal remains the single greatest public concern about nuclear power. This could be best resolved through intensified international co-operation among OECD countries. One of the main issues here lies in how to convey to the public and to political authorities, experts' confidence in today's ability to provide for long-term safe solutions.

The experts also agreed that the Agencies should continue studies and other activities on a number of economic and technical areas related to nuclear energy. These include options for future development, such as the breeder reactor which continues to hold economic promise for some countries

## Twenty Years of International Nuclear Safety Co-operation

To commemorate the beginnings of nuclear safety co-operation, the NEA decided to mark this anniversary with a Special Session of the Committee on the Safety of Nuclear Installations (CSNI) on 19th November 1985. Prominent personalities addressed the meeting and described the evolution of nuclear safety co-operation. They noted a significant change in the approach to safety and a complete acceptance of the need to collaborate. Looking towards the future, the need was pointed out for continued safety research in particular, in order to maintain expertise in the regulatory field.



Noting that "international co-operation can be a positive force in gaining and reinforcing public acceptance of nuclear technology", the CSNI Chairman told the gathering that the future of nuclear power depends on the ability of user countries to achieve the safest, most efficient operation of their reactors. The CSNI is committed to continuing its programme of international co-operation, broadening access to important safety information, organising joint research efforts and fostering mutual understanding of impending regulatory changes affecting others.

#### REVIEW OF THE CONTINUED SUITABILITY OF THE DUMPING SITE FOR RADIOACTIVE WASTE IN THE NORTH-EAST ATLANTIC

The Decision of the OECD Council establishing a Multilateral Consultation and Surveillance Mechanism for Sea Dumping of Radioactive Waste, requires that NEA assess the suitability of dumping sites proposed by national authorities. The North-East Atlantic dumping site has been used since 1974. Its suitability was reviewed by a Group of Experts in 1979 and confirmed in 1980 by the OECD Steering Committee for Nuclear Energy. Such reviews are foreseen every five years by the OECD Mechanism and it was therefore appropriate for a new review to be completed in 1985.

A Group of experts from NEA Member Countries participating in the Mechanism was given the mandate to review the continued suitability of the site, taking into account the relevant provisions of the 1972 London Dumping Convention and the IAEA Definition and Recommendations for the purposes of the Convention as well as the requirements of the OECD Mechanism itself. A radiological assessment of the impact of dumping operations at this site was the main basis for judging the suitability of the site, together with a number of other technical criteria described in Annex III of the London Dumping Convention and IAEA documents

All the experts involved in the review, with one exception, confirmed the adequacy of the scientific basis used for the assessment of the radiological impact of dumping operations which could be carried out in the North-East Atlantic site, for both man and the marine environment. They also considered that from a purely radiological protection point of view, the North-East Atlantic site would be suitable for continued dumping at given rates since these would not result in significant doses to man.

The results of the review were submitted to the Steering Committee at its Session in April 1985 and, while noting that the existing site met internationally-accepted radiation protection criteria and the scientific assessment required under the Mechanism, the Committee recognised that other aspects should be considered before any country issued a special permit for continued dumping at this site. It authorised transmission of the report to the London Dumping Convention Parties. (See Note on London Dumping Convention under "Multilateral Agreements" in this issue of the Bulletin.)

At its October 1985 Session, the Steering Committee noted the conclusions and recommendations of the first four years of operation of the NEA co-ordinated research and environmental surveillance programme related to the

disposal of radioactive waste and agreed that it be continued for five years with the objective of improving the scientific data base and radiological assessments of the existing North-East Atlantic disposal site.

## • *International Atomic Energy Agency*

### REVISION OF THE IAEA DEFINITIONS AND RECOMMENDATIONS FOR THE PURPOSES OF THE LONDON DUMPING CONVENTION

For the purposes of the Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter (London Dumping Convention), and in accordance with the requirements laid down in its Annex I, paragraph 6, and Annex II, section D, the International Atomic Energy Agency (IAEA) established in 1974 (a) a Provisional Definition of high-level radioactive wastes or other radioactive matter unsuitable for dumping at sea, and (b) Recommendations which the Contracting Parties should take fully into account in issuing permits for the dumping at sea of other radioactive wastes or radioactive matter.

These Provisional Definition and Recommendations (INFCIRC/205/Add.1) were adopted by the First Consultative Meeting of Contracting Parties to the Convention in 1976 for the control of radioactive waste dumping.

During the period 1975 - 1978, the IAEA reviewed and revised such Definition and Recommendations with a view to refining and improving them. The Revised Definition and Recommendations of 1978 (INFCIRC/205/Add.1/Rev.1) were adopted by the Third Consultative Meeting of Contracting Parties in that year.

Since the 1978 revision, considerable effort was devoted to further improving the Revised Definition and Recommendations by the IAEA in close co-operation with the International Maritime Organisation (IMO), which performs secretariat duties in relation to the Convention. This effort involved - besides numerous advisory groups, technical committees and consultants - the United Nations Scientific Committee on the Effects of Atomic Radiation (UNSCEAR), the United Nations Environment Programme (UNEP), the Nuclear Energy Agency of the Organisation for Economic Co-operation and Development (OECD/NEA) and the Commission of the European Communities (CEC); account was also taken of reports and studies prepared by the IMO/FAO/UNESCO/WMO/WHO/IAEA/UN/UNEP Joint Group of Experts on the Scientific Aspects of Marine Pollution (GESAMP). This second revision, which further reflects comments and suggestions received from IAEA Member States or made by Contracting Parties to the Convention at their Consultative Meetings, was completed earlier this year.

The Revised Definition of radioactive material unsuitable for dumping at sea has been formulated, in part, in qualitative terms and, in part, in numerical terms, based on the principles of radiation protection and scientific modelling. The Revised Recommendations provide guidance on the nature and

mendations, the 1985 revised version also comprises an Annex containing background information and advisory material.

The Revised Definition and Recommendations were approved by the IAEA Board of Governors on 19th September 1985 and forwarded to the Contracting Parties to the London Dumping Convention at their Ninth Consultative Meeting, held in London from 23rd to 27th September 1985. In that connection, the Director General of the IAEA was requested by the Board of Governors, as in the case of the earlier versions of 1974 and 1978, to inform the Contracting Parties to the Convention that the 1985 Revised Definition and Recommendations (a) should not be construed as encouraging in any way the dumping at sea of radioactive wastes or other radioactive matter, and (b) will continue to be subject to review and revision by the IAEA, as and when appropriate, in the light of technological developments and increased scientific knowledge (see London Convention under "Multilateral Agreements" in this issue of the Bulletin).

#### ADVISORY SERVICES IN NUCLEAR LEGISLATION AND REGULATIONS

Among the steps taken by the Egyptian Government for the implementation of a nuclear power programme, the Atomic Energy Authority of Egypt has been vested with the responsibility of preparing legislation and regulations on nuclear safety and licensing and related topics. For preparatory works in this regard, it established in 1984 a Nuclear Regulatory and Safety Centre which has elaborated a draft law on nuclear control and safety, in consultation with other authorities and institutions involved. At the request of the Egyptian authorities, advisory services were provided by the IAEA in October 1985 for a review of such draft legislation as well as for the framing of implementing regulations, taking into account relevant IAEA standards and recommendations.

#### THIRD REVIEW CONFERENCE OF THE PARTIES TO THE TREATY ON THE NON-PROLIFERATION OF NUCLEAR WEAPONS

In accordance with Article VIII 3 of the Treaty on the Non-Proliferation of Nuclear Weapons (NPT), the Third Conference of the Parties to the Treaty was held in Geneva from 27th August to 21st September 1985 in order to review the operation of the Treaty with a view to assuring that the purposes of the Preamble and the provisions of the Treaty were being achieved. The previous two Conferences were held in Geneva from 5th to 30th May 1975 and from 11th August to 7th September 1980 respectively. (The text of the Final Declaration, approved by consensus on 21st September 1985, is reproduced below.)

The IAEA Director General, in his statement to the Twenty-Ninth Regular Session of the IAEA General Conference on 23rd September, reported on the following salient features of the conclusions of the Review Conference specifically concerning the IAEA:

The main issue before the Review Conference was nuclear disarmament and the achievement of measures leading to it. The Review Conference also laid

emphasis on Article III of NPT, which deals with safeguards, and Article IV, which deals with the rights of all Parties to the fullest exchange of material, equipment and technology. It made a number of specific comments about the IAEA's responsibilities and achievements in relation to those two Articles, including recommendations for action.

As to IAEA safeguards, the Review Conference stated its view that, together with the non-proliferation commitments laid down in NPT, safeguards not only are central to international peace and security but are also essential for peaceful nuclear trade and co-operation. It welcomed the voluntary safeguards agreements concluded so far with four nuclear-weapon States. It also recommended that further consideration should be given to the extension of safeguards to additional, and eventually all, peaceful nuclear facilities in the nuclear-weapon States, as and when the IAEA's resources permit it. The fact that the IAEA, in its safeguards activities, had not detected any diversion of safeguarded material for nuclear weapons or other nuclear explosive purposes was noted with satisfaction, as was the fact that safeguards had not hampered the economic, scientific or technological development of Parties to the Treaty, or international peaceful nuclear co-operation. The Review Conference urged that such situation be maintained.

The Review Conference further emphasised the importance of improving the efficiency and effectiveness of safeguards and made certain specific recommendations in that regard. It called upon Parties to the Treaty to continue their political, technical and financial support for safeguards, and underlined the need for the IAEA to be provided with the necessary resources to ensure the continued effective discharge of its safeguards responsibilities.

With regard to the peaceful uses of nuclear energy, the Review Conference reaffirmed the inalienable right of all Parties to the Treaty to develop research into nuclear energy, and the production and use of nuclear energy for peaceful purposes, without discrimination. It also reaffirmed the undertaking of all Parties to facilitate the fullest possible exchange of equipment, materials and scientific and technological information for the peaceful uses of nuclear energy. It encouraged bilateral and multilateral co-operation to assist the further development of nuclear energy applications for peaceful purposes, with due consideration for the developing areas of the world, and bearing in mind the needs of the least developed countries.

#### FINAL DECLARATION

The States Party to the Treaty on the Non-Proliferation of Nuclear Weapons which met in Geneva from 27th August to 20th September 1985 to review the operation of the Treaty solemnly declare:

- their conviction that the Treaty is essential to international peace and security,
- their continued support for the objectives of the Treaty which are
  - the prevention of proliferation of nuclear weapons or other nuclear explosive devices;

- the cessation of the nuclear arms race, nuclear disarmament and a Treaty on general and complete disarmament;
- the promotion of co-operation between States Parties in the field of the peaceful uses of nuclear energy,
- the reaffirmation of their firm commitment to the purposes of the Preamble and the provisions of the Treaty,
- their determination to enhance the implementation of the Treaty and to further strengthen its authority.

## • *CERN*

### PORTUGAL ACCEDES TO CERN

By Government Decree No. 30/85, published in the Portuguese Official Gazette of 12th August 1985, the Government has approved, on 18th July 1985, Portugal's accession to the 1953 Convention for the Establishment of a European Organisation for Nuclear Research and its Financial Protocol. With this accession, the European Organisation for Nuclear Research (CERN) now counts fourteen members: Austria, Belgium, Denmark, France, Federal Republic of Germany, Greece, Italy, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and United Kingdom. Its purpose is to provide for collaboration among European states in nuclear research of a scientific and fundamental character and it has established an international laboratory to carry out research relating to high-energy particles.

## • *INLA*

### NUCLEAR INTER JURA '85

As reported in previous issues of the Nuclear Law Bulletin (Nos. 34 and 35) the Seventh Congress of the International Nuclear Law Association (INLA) was held in Constance (Federal Republic of Germany) from 29th September to 2nd October 1985.

The general theme of the Conference "Status, prospects and possibilities of international harmonisation in the field of nuclear energy law"

provided a framework within which the four international Working Groups, set up to deal with different aspects of the theme, worked. Each Group addressed particular questions, as follows.

- Working Group 1: Should it be recommended to work out international principles and rules on the licensing and decommissioning of nuclear installations and to make them subject to international instruments?
- Working Group 2: Should it be recommended to revise the international nuclear liability conventions, and in which fields and by which means could this objective be achieved?
- Working Group 3: Should it be recommended to regulate the relations between the supplying and the receiving countries in a general way by international instruments in order to set up harmonised and internationally accepted principles for nuclear exportation and importation?
- Working Group 4: Should the various interested countries work more closely together with a view to seeking more uniform national regulatory solutions in the area of radiation protection?

The Groups' reports formed the centre of four Working Sessions at the Conference which were supplemented by papers on special aspects by speakers not members of the Group. In addition, a "Resumé Session", provided an opportunity for speakers from the International Atomic Energy Agency (IAEA), the Nuclear Energy Agency (NEA) and from a national administration to summarise the general theme of the Congress from their specific viewpoints

On the basis of the Working Session discussions, the INLA General Assembly passed recommendations concerning the results of Working Sessions 1, 3 and 4. Working Group 2 refrained from presenting recommendations since it felt that its work had not sufficiently progressed to the stage where formal recommendations could be adopted. The recommendations aim at more international harmonisation of nuclear legislation and will be presented as formal statements of INLA to the competent international organisations and to Governments.

The proceedings of the Conference will be published in early 1986

# AGREEMENTS

## • *Austria-Czechoslovak Socialist Republic*

### 1982 AGREEMENT ON QUESTIONS OF COMMON INTEREST IN RELATION TO NUCLEAR FACILITIES

This Agreement between the Republic of Austria and the Czechoslovak Socialist Republic was signed on 18th November 1982 and entered into force on 1st June 1984 (published in Bundesgesetzblatt No. 208/1984).

The Agreement provides for exchange of information on three levels:

- exchange of general information about the respective nuclear energy programmes and related legal and administrative matters. Expert talks are foreseen periodically, at least every two years,
- exchange of specific information concerning individual plants close to the border. This information process must be initiated at the latest six months before start-up of such a plant and must provide data on safety, radiation protection, nuclear material safeguards and physical protection. During operation, information is provided periodically on environmental data - or immediately, if significant changes occur,
- information in case of an "unforeseen event" as a consequence of which it cannot be excluded that it could endanger the population across the border. This obligation to inform is not linked to the distance of the plant from the border and must be carried out through a special communication channel between both countries. The information flow must start upon occurrence of the event or at the latest, when measures are implemented for protection of the population in the country where the event has occurred.

## • *Canada-Euratom*

### RENEWAL OF NUCLEAR CO-OPERATION AGREEMENT (1985)

The Government of Canada and the European Atomic Energy Community (EURATOM) agreed, with effect from 21st June 1985, to renew their Agreement

for Co-operation in the Peaceful Uses of Atomic Energy originally entered into by the two Parties on 6th October 1959 and subsequently amended in 1978 and 1981 (see Nuclear Law Bulletin No. 29).

In addition to an extension of twenty years the present Agreement, in the form of an exchange of letters between Euratom and the Government of Canada, amends the 1959 Agreement in several important respects. Prior written consent of Canada to retransfers by the Community to third parties of materials or equipment obtained pursuant to the Agreement is no longer required in the case of natural uranium, depleted uranium, other source materials, uranium enriched to 20% or less in the isotope U-235 and heavy water, provided that such third parties have been identified by Canada and that procedures acceptable to both Parties relating to such transfers have been established. In all other cases, the prior consent of Canada is required

Canada also provides its consent for the retransfer, in any given period of twelve months, to any third party Signatory to the Nuclear Non-Proliferation Treaty of the following materials and quantities (a) special fissionable material (50 effective grams), (b) natural uranium (500 kilograms), (c) depleted uranium (1,000 kilograms); (d) thorium (1,000 kilograms)

The Parties have also agreed to apply mechanisms, other than those set forth in the Agreement, in order to make material subject to the Agreement, or remove material from its coverage, provided that there is prior written agreement in each case on the conditions under which such mechanisms are to be applied.

## • *France-CERN*

### 1985 DECREE PUBLISHING THE AGREEMENT BETWEEN FRANCE AND CERN ON THE SAFETY OF FACILITIES FOR THE ELECTRON-POSITRON COLLIDER

The Agreement concluded on 31st October 1984 by France and the European Organisation for Nuclear Research (CERN) was published by Decree No. 85-456 of 23rd April 1985 (Official Gazette of 27th April 1985).

CERN, whose headquarters are in Geneva, Switzerland, owns facilities extending onto French territory where its legal status is defined in an Agreement concluded with France on 13th September 1965 and revised on 16th June 1972 (see Nuclear Law Bulletin No. 11).

This new Agreement concerns the future electron-positron collider (LEP) Both parties consider that its operation on French territory should offer the same safety guarantees as provided by the French regime for major nuclear installations. To this effect, LEP facilities located on French territory will be subject to approval and control by the French authorities, represented by the Central Service for the Safety of Nuclear Installations. The provisions



applying to French major nuclear installations will also be applied to LEP. All energy in excess of 100 GeV per beam and any use of LEP for accelerating particles other than electrons and positrons will be subject to prior authorisation.

## • *Japan – People's Republic of China*

### 1985 AGREEMENT ON CO-OPERATION IN THE PEACEFUL USES OF NUCLEAR ENERGY

On 31st July 1985 the Government of Japan and the Government of the People's Republic of China concluded, in Tokyo, a nuclear co-operation agreement setting out the methods and the fields of co-operation between Japan and China in the peaceful uses of nuclear energy.

The Agreement provides for co-operation mainly through the exchange of experts and information, as well as nuclear material, equipment and facilities, as defined in the Agreement, in terms to be decided between the supplier and the recipient.

The Agreement specifies the fields in which co-operation will be carried out and provides that co-operation shall only be for peaceful purposes. To ensure compliance with this provision, the Contracting Parties will request the International Atomic Energy Agency to apply safeguards within their respective jurisdictions with respect to nuclear material, equipment and facilities received pursuant to the Agreement and special fissionable material recovered or produced as a by-product. The Parties agree as well not to transfer any of the foregoing without the prior written consent of the other Contracting Party and to apply appropriate measures for their physical protection.

The Agreement will enter into force as soon as diplomatic documents are exchanged notifying completion of internal legal procedures, and it will remain in force for fifteen years with automatic extension every five years thereafter.

## • *United States – People's Republic of China*

### 1985 AGREEMENT FOR CO-OPERATION CONCERNING THE PEACEFUL USES OF NUCLEAR ENERGY

This Agreement, signed at the White House on 23rd July 1985 by President Reagan and President Li Xiannian, was transmitted the following day

to Congress for the review required by United States law, which provides that it may be brought into force only after expiry of a 90-day period following its transmission.

The Agreement provides a framework for nuclear co-operation for peaceful purposes between both countries. It permits the sale of reactors, equipment and low enriched uranium to the People's Republic of China. No transfer of so-called sensitive technology or reprocessing or re-transfer of the material thus supplied may be effected without prior United States consent. The Agreement is valid for a period of thirty years.

The Agreement is reproduced in the "Texts" Chapter of this issue of the Bulletin.

## MULTILATERAL AGREEMENTS

### RATIFICATION OF THE 1982 PROTOCOLS TO AMEND THE PARIS CONVENTION AND THE BRUSSELS SUPPLEMENTARY CONVENTION (1985)

During the past months, several more countries have ratified the Protocols of 16th November 1982 amending the Paris Convention of 29th July 1960 on Third Party Liability in the Field of Nuclear Energy and the Brussels Convention of 31st January 1963, supplementary to the Paris Convention, respectively. These countries are Belgium, the Federal Republic of Germany, Italy and the United Kingdom, thus bringing the Contracting Parties to six for the Paris Convention and five for the Brussels Supplementary Convention (see Tables below).

The United Kingdom declared when ratifying the Protocol to amend the Paris Convention that it also applied to the following territories: the British Virgin Islands, the Cayman Islands, Gibraltar, Hong Kong, Montserrat, St. Helena and its Dependencies. The Federal Republic of Germany declared on ratification that both Protocols also applied to Berlin (West).

#### 1982 Protocol to amend the Paris Convention

Country	Date of Ratification
Belgium	19th September 1985
Federal Republic of Germany	25th September 1985
Italy	28th June 1985
Portugal	28th May 1984
Sweden	8th March 1983
United Kingdom	19th August 1985

## 1982 Protocol to amend the Brussels Supplementary Convention

---

Country	Date of Ratification
Belgium	20th August 1985
Federal Republic of Germany	25th September 1985
Italy	14th June 1985
Sweden	22nd March 1983
United Kingdom	8th August 1985

---

### CONVENTION ON THE PHYSICAL PROTECTION OF NUCLEAR MATERIAL

On 15th August 1985, Norway ratified the Convention of 3rd March 1980 on the Physical Protection of Nuclear Material. Amendments to the Norwegian Penal Code were necessary for such ratification and they were adopted on 7th June 1985. Brazil for its part ratified the Convention on 17th October 1985.

Also, the Assembly of the Socialist Federative Republic of Yugoslavia approved last July an Act to ratify the Convention. As implementation of the Convention will require certain amendments to the regulations in the Republics and Autonomous Provinces of Yugoslavia, the Act was submitted to approval by the Regional Assemblies prior to its adoption. In addition, amendments to the Penal Act of 1976 are required. The Act authorising ratification was published in the Yugoslav Official Gazette, International Agreements No. 9/85; it entered into force on 3rd August 1985.

Finally, the Swiss Federal Council (Government) in a message of 22nd May 1985 proposed to Parliament that it approve the Convention on the Physical Protection of Nuclear Material. Having already fulfilled the duties laid down by the Convention in respect of Signatory States, Switzerland does not need to pass a law. The Federal Council plans to sign and ratify the Convention simultaneously when Parliament approves it.

It is recalled that this Convention aims to ensure a wide protection during international transport of nuclear substances to be used for peaceful purposes, its object is to co-ordinate actions by States to this effect. Under the Convention, Signatory Governments undertake to collaborate with each other to recover stolen nuclear material and to set up the legal basis required to prosecute and sanction offences committed in connection with such material, whether during international transport or within the boundaries of one State.

The status of signatures and ratifications of the Convention on the Physical Protection of Nuclear Material was given in Nuclear Law Bulletin No. 35. Of the thirty-nine Signatories, fifteen have now ratified the Convention; it still requires six ratifications or accessions for its entry into force.

CONVENTION ON THE PREVENTION OF MARINE POLLUTION BY DUMPING OF WASTES AND OTHER MATTER

The 1972 London Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter provides that consultative meetings of Contracting Parties should be held regularly to take note of progress achieved in its implementation and, where necessary, to revise the Convention and its Annexes in accordance with the simplified procedure laid down by the Convention.

At the Seventh Consultative Meeting held in February 1983, the Contracting Parties opposed to the sea dumping of radioactive waste had proposed, failing an immediate revision of the Annexes to the Convention with a view to prohibiting such operations, the adoption of a Resolution calling for a moratorium in this field. This Resolution was passed by a wide majority. In addition, the Resolution referred the proposals for revision of the Annexes to the Convention for consideration by scientific experts in the field of marine ecology, oceanography or radiological protection.

The Eighth Consultative Meeting took note in February 1984 of the progress of work in this field and decided arrangements for the setting up of a panel of independent experts to study the scientific and technical aspects of these proposals.

An Expanded Panel met in June 1985 to discuss the final report which was the outcome of this review. The report obtained a wide support without, however, a general consensus being achieved within the Expanded Panel. Nevertheless, the predominant opinion amongst scientists participating in the meeting may be expressed by the following conclusion offered by the Swedish Expert:

"No scientific or technical grounds could be found to treat the option of sea dumping differently from other available options when applying internationally accepted principles of radioprotection to radioactive waste disposal".

At the Ninth Consultative Meeting in September 1985, the Contracting Parties were not able to reach agreement on the practical conclusions to be drawn from the report as regards application of the Convention. Following the discussions a majority of the Contracting Parties adopted a further Resolution on sea dumping of radioactive waste.

This Resolution aims at extending the suspension of all dumping of radioactive waste at sea, pending further consideration of proposals for amendment of the Annexes to the Convention resulting in a total prohibition of such dumping. It is provided in particular that this suspension will be maintained until completion of the series of additional studies and assessments referred to in the Resolution.

A Table of the Contracting Parties to the London Convention is reproduced below, followed by Tables of Parties having approved amendments on procedures for settlement of disputes, and having opposed amendments concerning lists of substances in Annexes to the Convention.

Table I

List of countries which have implemented  
Articles XVII or XVIII of the Convention\*

Country	Date of ratification or accession	Date of entry into force
Afghanistan	2nd April 1975	30th August 1975
Argentina	11th September 1979	11th October 1979
Australia	21st August 1985	21st September 1985
Belgium	12th June 1985	12th July 1985
Brazil	26th July 1982	25th August 1982
Byelorussian SSR	29th January 1976	28th February 1976
Canada	13th November 1975	14th December 1975
Cape Verde	26th May 1977	25th June 1977
Chile	4th August 1977	3rd September 1977
Cuba	1st December 1975	1st January 1976
Denmark	23rd October 1974	30th August 1975
Dominican Republic	7th December 1973	30th August 1975
Finland	3rd May 1979	2nd June 1979
France	3rd February 1977	5th March 1977
Gabon	5th February 1982	7th March 1982
German Democratic Republic	20th August 1976	19th September 1976
Germany, Federal Republic of	8th November 1977	8th December 1977
Greece	10th August 1981	9th September 1981
Guatemala	14th July 1975	30th August 1975
Haiti	28th August 1975	27th September 1975
Honduras	2nd May 1980	1st June 1980
Hungary	5th February 1976	6th March 1976
Iceland	24th May 1973	30th August 1975
Ireland	17th February 1982	19th March 1982
Italy	30th April 1984	30th May 1984
Japan	15th October 1980	14th November 1980
Jordan	11th November 1973	30th August 1975
Kenya	7th January 1976	6th February 1976
Kiribati	12th May 1982	11th June 1982
Libyan Arab Jamahiriya	22nd November 1976	22nd December 1976
Mexico	7th April 1975	30th August 1975
Monaco	16th May 1977	15th June 1977
Morocco	18th February 1977	20th March 1977
Nauru	26th July 1982	25th August 1982
Netherlands	2nd December 1977	2nd January 1978
New Zealand	30th April 1975	30th August 1975
Nigeria	19th March 1976	18th April 1976

\* Under Articles XVII and XVIII of the London Convention, the instruments of ratification or accession shall be deposited with the Governments of Mexico, the USSR, the United Kingdom or the United States.

Table I (cont'd)

Country	Date of ratification or accession	Date of entry into force
Norway	4th April 1974	30th August 1975
Oman	13th March 1984	12th April 1984
Panama	31st July 1975	30th August 1975
Papua New Guinea	10th March 1980	9th April 1980
Philippines	10th August 1973	30th August 1975
Poland	23rd January 1979	22nd February 1979
Portugal	14th April 1978	14th May 1978
Seychelles	29th October 1984	28th November 1984
Solomon Islands	6th March 1984	5th April 1984
South Africa	7th August 1978	6th September 1978
Spain	31st July 1974	30th August 1975
Surinam	21st October 1980	20th November 1980
Sweden	21st February 1974	30th August 1975
Switzerland	31st July 1979	30th August 1979
Tunisia	13th April 1976	13th May 1976
Ukrainian SSR	5th February 1976	6th March 1976
United Arab Emirates	9th August 1974	30th August 1975
USSR	30th December 1975	29th January 1976
United Kingdom	17th November 1975	17th December 1975
United States	29th April 1974	30th August 1975
Yugoslavia	25th June 1976	25th July 1976
Zaire	16th September 1975	16th October 1975

Table II

Contracting Parties which have accepted the 1978 amendments to  
the Convention concerning procedures for the settlement of disputes

Country	Date of deposit of acceptance
Belgium	12th June 1985
Canada	27th February 1979
Denmark	12th June 1979
France	1st October 1979
Italy	30th April 1984
Japan	15th October 1980
Netherlands	20th September 1979
Sweden	16th May 1980
United Kingdom	21st March 1980
United States	24th October 1980

Table III

Contracting Parties which made a declaration of non-acceptance  
of the 1980 amendments to the annexes to the Convention  
concerning the lists of substances

Country	Date of deposit of declaration
Japan	6th March 1981

SOUTH PACIFIC NUCLEAR FREE ZONE TREATY

On the occasion of the Sixteenth South Pacific Forum which was held in Rarotonga, Cook Islands from 5th to 6th August 1985 the participating countries approved the text of the South Pacific Nuclear Free Zone Treaty.

This Treaty provides for the establishment in the South Pacific of a nuclear weapon free zone. The Signatories have pledged not to develop or supply nuclear weapons and to make use of as wide and efficient an application of the IAEA safeguards system as possible. The Treaty was signed on 6th August by the representatives of the following countries: Australia, Cook Islands, Fiji, Kiribati, New Zealand, Niue, Tuvalu, Western Samoa. The Depository of the Treaty is the Director of the South Pacific Bureau for Economic Co-operation.

In general, the zone covered by the Treaty extends from Australia and Papua New Guinea, to the west to the region covered by the Tlatelolco Treaty relating to the denuclearisation of Latin America, to the east, its boundary to the north is the Equator and to the south the Antarctic zone (another denuclearised zone).

The Treaty is supplemented by three Protocols. Protocol 1 is addressed to the United States, France, and the United Kingdom and invites them to apply to the territories, for which they have international responsibility, the prohibitions contained in the Treaty. Protocols 2 and 3 are addressed to the same countries, as well as to the People's Republic of China and the USSR in their capacities as nuclear weapon states and calls upon these countries to commit themselves to refrain from using a nuclear weapon against any Party to the Treaty and from conducting nuclear explosive tests in the nuclear free zone. Given the circumstances, Participants at the Forum recognised the necessity of consultations with the countries concerned by the Protocols before they can be opened for signature

The South Pacific Nuclear Free Zone Treaty is reproduced in the "Texts" Chapter of this issue of the Bulletin.

# TEXTS

## *United States-People's Republic of China*

### AGREEMENT FOR CO-OPERATION BETWEEN THE GOVERNMENT OF THE UNITED STATES OF AMERICA AND THE GOVERNMENT OF THE PEOPLE'S REPUBLIC OF CHINA CONCERNING PEACEFUL USES OF NUCLEAR ENERGY

The Government of the United States of America and the  
Government of the People's Republic of China,

Desiring to establish extensive co-operation in the peaceful uses of  
nuclear energy on the basis of mutual respect for sovereignty,  
non-interference in each other's internal affairs, equality and mutual benefit,

Noting that such co-operation is one between two nuclear weapon  
states,

Affirming their support of the objectives of the statute of the  
International Atomic Energy Agency (IAEA),

Affirming their intention to carry out such co-operation on a stable,  
reliable and predictable basis,

Mindful that peaceful nuclear activities must be undertaken with a  
view to protecting the international environment from radioactive, chemical  
and thermal contamination,

Have agreed as follows:

#### Article 1 - Definitions

For the purposes of this Agreement:

1. "Parties" means the Government of the United States of America and the  
Government of the People's Republic of China;
2. "authorised person" means any individual or any entity under the  
jurisdiction of either party and authorised by that party to receive, possess,  
use, or transfer material, facilities or components;
3. "person" means any individual or any entity subject to the jurisdiction  
of either party but does not include the Parties to this Agreement;



4. "peaceful purposes" include the use of information, technology, material, facilities and components in such fields as research, power generation, medicine, agriculture and industry but do not include use in, research specifically on or development of any nuclear explosive device, or any military purpose,
5. "material" means source material, special nuclear material or byproduct material, radioisotopes other than byproduct material, moderator material, or any other such substance so designated by agreement of the Parties,
6. "source material" means.
  - 1) uranium, thorium, or any other material so designated by agreement of the Parties, or
  - 11) ores containing one or more of the foregoing materials, in such concentration as the Parties may agree from time to time,
7. "special nuclear material" means
  - 1) plutonium, uranium 233, or uranium enriched in the isotope 235, or
  - 11) any other material so designated by agreement of the Parties;
8. "byproduct material" means any radioactive material (except special nuclear material) yielded in or made radioactive by exposure to the radiation incident to the process of producing or utilising special nuclear material,
9. "moderator material" means heavy water, or graphite or beryllium of a purity suitable for use in a reactor to slow down high velocity neutrons and increase the likelihood of further fission, or any other such material so designated by agreement of the Parties;
10. "high enriched uranium" means uranium enriched to twenty per cent or greater in the isotope 235;
11. "low enriched uranium" means uranium enriched to less than twenty per cent in the isotope 235;
12. "facility" means any reactor, other than one designed or used primarily for the formation of plutonium or uranium 233, or any other item so designated by agreement of the Parties,
13. "reactor" is defined in Annex I, which may be modified by mutual consent of the Parties;
14. "sensitive nuclear facility" means any plant designed or used primarily for uranium enrichment, reprocessing of nuclear fuel, heavy water production or fabrication of nuclear fuel containing plutonium,
15. "component" means a component part of a facility or other item, so designated by agreement of the Parties,
16. "major critical component" means any part or group of parts essential to the operation of a sensitive nuclear facility,

17. "sensitive nuclear technology" means any information (including information incorporated in a facility or an important component) which is not in the public domain and which is important to the design, construction, fabrication, operation or maintenance of any sensitive nuclear facility, or such other information so designated by agreement of the Parties.

## Article 2 - Scope of Co-operation

1. The Parties shall co-operate in the use of nuclear energy for peaceful purposes in accordance with the provisions of this Agreement. Each Party shall implement this Agreement in accordance with its respective applicable treaties, national laws, regulations and licence requirements concerning the use of nuclear energy for peaceful purposes. The Parties recognise, with respect to the observance of this Agreement, the principle of international law that provides that a Party may not invoke the provisions of its internal law as justification for its failure to perform a treaty.

2. Transfers of information, technology, material, facilities and components under this Agreement may be undertaken directly between the Parties or through authorised persons. Such co-operation shall be subject to this Agreement and to such additional terms and conditions as may be agreed by the Parties.

3. Material, facilities and components will be regarded as having been transferred pursuant to this Agreement only upon receipt of confirmation by the supplier Party, from the appropriate Government authority of the recipient Party, that such material, facilities or components will be subject to this Agreement and that the proposed recipient of such material, facilities or components, if other than the recipient Party, is an authorised person.

4. Any transfer of sensitive nuclear technology, sensitive nuclear facilities, or major critical components will, subject to the principles of this Agreement, require additional provisions as an amendment to this Agreement

## Article 3 - Transfer of Information and Technology

Information and technology concerning the use of nuclear energy for peaceful purposes may be transferred. Transfers of such information and technology shall be that which the Parties are permitted to transfer and may be accomplished through various means including reports, data banks, computer programs, conferences, visits and assignments of persons to facilities. Fields which may be covered include, but shall not be limited to, the following:

- 1) research, development, experiment, design, construction, operation, maintenance and use and retirement of reactors and nuclear fuel fabrication technology;
- 2) the use of material in physical and biological research, medicine, agriculture and industry;
- 3) nuclear fuel cycle research, development and industrial application to meet civil nuclear needs, including multilateral approaches to

guaranteeing nuclear fuel supply and appropriate techniques for management of nuclear wastes;

- 4) health, safety, environment, and research and development related to the foregoing;
- 5) assessing the role nuclear power may play in international energy plans;
- 6) codes, regulations and standards for the nuclear energy industry; and
- 7) such other fields as may be agreed by the Parties.

#### Article 4 - Transfer of Material, Facilities and Components

1. Material, facilities and components may be transferred pursuant to this Agreement for applications consistent with this Agreement. Any special nuclear material to be transferred under this Agreement shall be low enriched uranium except as provided in paragraph 4 of this Article.

2. Low enriched uranium may be transferred for use as fuel in reactors and reactor experiments, for conversion or fabrication, or for such other purposes as may be agreed by the Parties.

3. The quantity of special nuclear material transferred under this Agreement shall be the quantity which the Parties agree is necessary for any of the following purposes: the loading of reactors or use in reactor experiments, the efficient and continuous operation of such reactors or conduct of such reactor experiments, and the accomplishment of such other purposes as may be agreed by the Parties.

4. Small quantities of special nuclear material may be transferred for use as samples, standards, detectors, targets, radiation sources and for such other purposes as the Parties may agree.

#### Article 5 - Retransfers, Storage, Reprocessing, Enrichment, Alteration, and No Use for Military Purposes

1. Material, facilities, components or special nuclear material transferred pursuant to this Agreement and any special nuclear material produced through the use of such material or facilities may be retransferred by the recipient Party, except that any such material, facility, components or special nuclear material shall not be retransferred to unauthorised persons or, unless the Parties agree, beyond its territory.

2. Neither Party has any plans to enrich to twenty per cent or greater, reprocess, or alter in form or content material transferred pursuant to this Agreement or material used in or produced through the use of any material or facility so transferred. Neither Party has any plans to change locations for storage of plutonium, uranium 233 (except as contained in irradiated fuel elements), or high enriched uranium transferred pursuant to this Agreement or used in or produced through the use of any material or facility so transferred. In the event that a Party would like at some future time to undertake such

activities, the Parties will promptly hold consultations to agree on a mutually acceptable arrangement. The Parties undertake the obligation to consider such activities favorably, and agree to provide pertinent information on the plans during the consultations. Inasmuch as any such activities will be solely for peaceful purposes and will be in accordance with the provisions of this Agreement, the Parties will consult immediately and will seek agreement within six months on long-term arrangements for such activities. In the spirit of co-operation the Parties agree not to act within that period of time. If such an arrangement is not agreed upon within that period of time, the Parties will promptly consult for the purpose of agreeing on measures which they consider to be consistent with the provisions of the Agreement in order to undertake such activities on an interim basis. The Parties agree to refrain from actions which either Party believes would prejudice the long-term arrangements for undertaking such activities or adversely affect co-operation under this Agreement. The Parties agree that the consultations referred to above will be carried out promptly and mutual agreement reached in a manner to avoid hampering, delay or undue interference in their respective nuclear programs. Neither Party will seek to gain commercial advantage. Nothing in this Article shall be used by either Party to inhibit the legitimate development and exploitation of nuclear energy for peaceful purposes in accordance with this Agreement.

3. Material, facilities or components transferred pursuant to this Agreement and material used in or produced through the use of any material, facility or components so transferred shall not be used for any nuclear explosive device, for research specifically on or development of any nuclear explosive device, or for any military purpose.

#### Article 6 - Physical Security

1. Each Party shall maintain adequate physical security with respect to any material, facility or components transferred pursuant to this Agreement and with respect to any special nuclear material used in or produced through the use of any material or facility so transferred.

2. The Parties agree to the levels for the application of physical security set forth in Annex II, which levels may be modified by mutual consent of the Parties. The Parties shall maintain adequate physical security measures in accordance with such levels. These measures, as minimum protection measures, shall be comparable to the recommendations set forth in IAEA document INFCIRC/225/Revision 1 entitled "The Physical Protection of Nuclear Material", or in any revision of that document agreed to by the Parties.

3. The Parties shall consult at the request of either Party regarding the adequacy of physical security measures maintained pursuant to this Article

4. Each Party shall identify those agencies or authorities responsible for ensuring that levels of physical security are adequately met and having responsibility for coordinating response and recovery operations in the event of unauthorised use or handling of material subject to this Article. Each

Party shall also designate points of contact within its national authorities to co-operate on matters of out-of-country transportation and other physical security matters of mutual concern.

#### Article 7 - Cessation of Co-operation

1. Each Party shall endeavor to avoid taking any actions that affect co-operation under this Agreement. If either Party at any time following entry into force of this Agreement does not comply with the provisions of this Agreement, the Parties shall promptly hold consultations on the problem, it being understood that the other Party shall have the rights to cease further co-operation under this Agreement.

2. If either Party decides to cease further co-operation under this Agreement, the Parties shall make appropriate arrangements as may be required.

#### Article 8 - Consultations

1. The Parties shall consult at the request of either Party regarding the implementation of this Agreement, the development of further co-operation in the field of peaceful uses of nuclear energy, and other matters of mutual concern.

2. The Parties recognise that this co-operation in the peaceful uses of nuclear energy is between two nuclear weapon states and that bilateral safeguards are not required. In order to exchange experience, strengthen technical co-operation between the Parties, ensure that the provisions of this Agreement are effectively carried out, and enhance a stable, reliable, and predictable nuclear co-operation relationship, in connection with transfers of material, facilities and components subject under this Agreement the Parties will use diplomatic channels to establish mutually acceptable arrangements for exchanges of information and visits to material, facilities and components subject to this Agreement.

3. The Parties shall exchange views and information on the establishment and operation of their respective national accounting and control systems for source and special nuclear material subject to this Agreement.

#### Article 9 - Environmental Protection

The Parties shall consult, with regard to activities under this Agreement, to identify the international environmental implications arising from such activities and shall co-operate in protecting the international environment from radioactive, chemical or thermal contamination arising from peaceful nuclear co-operation under this Agreement and in related matters of health and safety.

#### Article 10 - Entry into Force and Duration

1. This Agreement shall enter into force on the date of mutual notifications of the completion of legal procedures by the Parties and shall remain in

force for a period of thirty years. This term may be extended by agreement of the Parties in accordance with their respective applicable procedures

2. Notwithstanding the suspension, termination or expiration of this Agreement or any co-operation hereunder for any reason, the provisions of Articles 5, 6, 7, and 8 shall continue in effect so long as any material, facility or components subject to these Articles remain in the territory of the Party concerned or any material, facility or components subject to these Articles remain subject to that Party's right to exercise jurisdiction or to direct disposition elsewhere.

Done at Washington on 23rd July 1985.

\*  
\* \*

#### ANNEX I

##### Definition of "reactor"

"Reactor" means:

1. any apparatus, other than a nuclear weapon or other nuclear explosive device, in which a self-sustaining fission chain reaction is maintained by utilising uranium, plutonium or thorium, or any combination thereof; or
2. any of the following major parts of an apparatus described in paragraph (1):
  - 1) a pressure vessel designed to contain the core,
  - 2) primary coolant pumps;
  - 3) fuel charging or discharging machines;
  - 4) control rods.

A "reactor" does not include the steam turbine generator portion of a nuclear power plant.

## ANNEX II

Pursuant to paragraph 2 of Article 6, the agreed levels of physical security to be ensured by the competent national authorities in the use, storage and transportation of the materials listed in the attached table shall as a minimum include protection characteristics as below.

### Category III

Use and storage within an area to which access is controlled.

Transportation under special precautions including prior arrangements among sender, recipient and carrier, and prior agreement between entities subject to the jurisdiction and regulation of supplier and recipient States, respectively, in case of international transport specifying time, place and procedures for transferring transport responsibility.

### Category II

Use and storage within a protected area to which access is controlled, i.e., an area under constant surveillance by guards or electronic devices, surrounded by a physical barrier with a limited number of points of entry under appropriate control, or any area with an equivalent level of physical protection.

Transportation under special precautions including prior arrangements among sender, recipient and carrier, and prior agreement between entities subject to the jurisdiction and regulation of supplier and recipient States, respectively, in case of international transport, specifying time, place and procedures for transferring transport responsibility.

### Category I

Material in this category shall be protected with highly reliable systems against unauthorised uses as follows.

Use and storage within a highly protected area, i.e., a protected area as defined for category II above, to which, in addition, access is restricted to persons whose trustworthiness has been determined, and which is under surveillance by guards who are in close communication with appropriate response forces. Specific measures taken in this context should have as their objective the detection and prevention of any assault, unauthorised access or unauthorised removal of material.

Transportation under special precautions as identified above for transportation of categories II and III materials and, in addition, under constant surveillance by escorts and under conditions which assure close communication with appropriate response forces.

AGREEMENT FOR CO-OPERATION BETWEEN THE GOVERNMENT OF  
THE UNITED STATES OF AMERICA AND THE GOVERNMENT OF  
THE PEOPLE'S REPUBLIC OF CHINA  
CONCERNING PEACEFUL USES OF NUCLEAR ENERGY

Categorisation of Nuclear Material<sup>e</sup>

Material	Form	Category		
		I	II	III
1. Plutonium <sup>a,f</sup>	Unirradiated <sup>b</sup>	2kg or more	Less than 2kg but more than 500g	500g or less <sup>c</sup>
2. Uranium 235 <sup>d</sup>	Unirradiated <sup>b</sup> - uranium enriched to 20% <sup>225</sup> U or more	5kg or more	Less than 5kg but more than 1kg	1kg or less <sup>c</sup>
	- uranium enriched to 10% <sup>235</sup> U but less than 20%	---	10kg or more	Less than 10kg <sup>c</sup>
	- uranium enriched above natural, but less than 10% <sup>235</sup> U	---	---	10kg or more
3. Uranium 233	Unirradiated <sup>b</sup>	2kg or more	Less than 2kg but more than 500g	500g or less <sup>c</sup>

Footnote to Table

- a. All plutonium except that with isotopic concentration exceeding 80% in plutonium 238.
- b. Material not irradiated in a reactor or material irradiated in a reactor but with a radiation level equal to or less than 100 rads/hour at one meter unshielded
- c. Less than a radiologically significant quantity should be exempted
- d. Natural uranium, depleted uranium and thorium and quantities of uranium enriched to less than 10% not falling in Category III should be protected in accordance with prudent management practice
- e. Irradiated fuel should be protected as Category I, II or III nuclear material depending on the category of the fresh fuel. However, fuel which by virtue of its original fissile material content is included as Category I or II before irradiation should only be reduced one Category level, where the radiation level from the fuel exceeds 100 rads/hour at one meter unshielded
- f. The State's competent authority should determine if there is a credible threat to disperse plutonium malevolently. The State should then apply physical protection requirements for Category I, II or III of nuclear material, as it deems appropriate and without regard to the plutonium quantity specified under each category herein, to the plutonium isotopes in those quantities and forms determined by the State to fall within the scope of the credible dispersal threat



## AGREED MINUTE

During the negotiation of the Agreement for Co-operation between the United States of America and the People's Republic of China concerning Peaceful Uses of Nuclear Energy signed today, the following understanding, which shall be an integral part of the Agreement, was reached.

The Parties agree that the interpretation and implementation of Article 5 (3) shall not involve any nuclear activities and related research and development carried out by either Party, as a nuclear weapon state, through the use of material, facilities, components and technology not subject to the Agreement.

## **SOUTH PACIFIC NUCLEAR FREE ZONE TREATY**

of 6th August 1985

### **PREAMBLE**

**The Parties to this Treaty**

**United in their commitment to a world at peace,**

**Gravely concerned that the continuing nuclear arms race presents the risk of nuclear war which would have devastating consequences for all people,**

**Convinced that all countries have an obligation to make every effort to achieve the goal of eliminating nuclear weapons, the terror which they hold for humankind and the threat which they pose to life on earth;**

**Believing that regional arms control measures can contribute to global efforts to reverse the nuclear arms race and promote the national security of each country in the region and the common security of all,**

**Determined to ensure, so far as lies within their power, that the bounty and beauty of the land and sea in their region shall remain the heritage of their peoples and their descendants in perpetuity to be enjoyed by all in peace;**

**Reaffirming the importance of the Treaty on the Non-Proliferation of Nuclear Weapons (NPT) in preventing the proliferation of nuclear weapons and in contributing to world security;**

**Noting, in particular, that Article VII of the NPT recognises the right of any group of States to conclude regional treaties in order to assure the total absence of nuclear weapons in their respective territories;**

**Noting that the prohibitions of emplacement and emplacement of nuclear weapons on the seabed and the ocean floor and in the subsoil thereof contained in the Treaty on the Prohibition of the Emplacement of Nuclear Weapons and Other Weapons of Mass Destruction on the Seabed and the Ocean Floor and in the Subsoil Thereof apply in the South Pacific,**

**Noting also that the prohibition of testing of nuclear weapons in the atmosphere or under water, including territorial waters or high seas, contained in the Treaty Banning Nuclear Weapon Tests in the Atmosphere, in Outer Space and Under Water applies in the South Pacific;**

**Determined to keep the region free of environmental pollution by radioactive wastes and other radioactive matter;**

**Guided by the decision of the Fifteenth South Pacific Forum at Tuvalu that a nuclear free zone should be established in the region at the earliest possible opportunity in accordance with the principles set out in the communique of that meeting;**

Have Agreed as follows.

#### Article 1 - Usage of Terms

For the purposes of this Treaty and its Protocols:

- a) "South Pacific Nuclear Free Zone" means the areas described in Annex 1 as illustrated by the map attached to that Annex,
- b) "territory" means internal waters, territorial sea and archipelagic waters, the seabed and subsoil beneath, the land territory and the airspace above them;
- c) "nuclear explosive device" means any nuclear weapon or other explosive device capable of releasing nuclear energy, irrespective of the purpose for which it could be used. The term includes such a weapon or device in unassembled and partly assembled forms, but does not include the means of transport or delivery of such a weapon or device if separable from and not an indivisible part of it;
- d) "stationing" means emplantation, emplacement, transportation on land or inland waters, stockpiling, storage, installation and deployment.

#### Article 2 - Application of the Treaty

1. Except where otherwise specified, this Treaty and its Protocols shall apply to territory within the South Pacific Nuclear Free Zone.
2. Nothing in this Treaty shall prejudice or in any way affect the rights, or the exercise of the rights, of any State under international law with regard to freedom of the seas.

#### Article 3 - Renunciation of Nuclear Explosive Devices

Each Party undertakes:

- a) not to manufacture or otherwise acquire, possess or have control over any nuclear explosive device by any means anywhere inside or outside the South Pacific Nuclear Free Zone;
- b) not to seek or receive any assistance in the manufacture or acquisition of any nuclear explosive device;
- c) not to take any action to assist or encourage the manufacture or acquisition of any nuclear explosive device by any State.

#### Article 4 - Peaceful Nuclear Activities

Each Party undertakes:

- a) not to provide source or special fissionable material, or equipment or material especially designed or prepared for the processing, use

or production of special fissionable material for peaceful purposes to.

- 1) any non-nuclear-weapon State unless subject to the safeguards required by Article III.1 of the NPT, or
- 11) any nuclear-weapon State unless subject to applicable safeguards agreements with the International Atomic Energy Agency (IAEA).

Any such provision shall be in accordance with strict non-proliferation measures to provide assurance of exclusively peaceful non-explosive use;

- b) to support the continued effectiveness of the international non-proliferation system based on the NPT and the IAEA safeguards system

#### Article 5 - Prevention of Stationing of Nuclear Explosive Devices

1. Each Party undertakes to prevent in its territory the stationing of any nuclear explosive device.

2. Each Party in the exercise of its sovereign rights remains free to decide for itself whether to allow visits by foreign ships and aircraft to its ports and airfields, transit of its airspace by foreign aircraft, and navigation by foreign ships in its territorial sea or archipelagic waters in a manner not covered by the rights of innocent passage, archipelagic sea lanes passage or transit passage of straits.

#### Article 6 - Prevention of Testing of Nuclear Explosive Devices

Each Party undertakes:

- a) to prevent in its territory the testing of any nuclear explosive device;
- b) not to take any action to assist or encourage the testing of any nuclear explosive device by any State.

#### Article 7 - Prevention of Dumping

1. Each Party undertakes:

- a) not to dump radioactive wastes and other radioactive matter at sea anywhere within the South Pacific Nuclear Free Zone,
- b) to prevent the dumping of radioactive wastes and other radioactive matter by anyone in its territorial sea;
- c) not to take any action to assist or encourage the dumping by anyone of radioactive wastes and other radioactive matter at sea anywhere within the South Pacific Nuclear Free Zone,

- d) to support the conclusion as soon as possible of the proposed Convention relating to the protection of the natural resources and environment of the South Pacific region and its Protocol for the prevention of pollution of the South Pacific region by dumping, with the aim of precluding dumping at sea of radioactive wastes and other radioactive matter by anyone anywhere in the region.

2. Paragraphs 1(a) and 1(b) of this Article shall not apply to areas of the South Pacific Nuclear Free Zone in respect of which such a Convention and Protocol have entered into force.

#### Article 8 - Control System

1. The Parties hereby establish a control system for the purpose of verifying compliance with their obligations under this Treaty.
2. The control system shall comprise
  - a) reports and exchange of information as provided for in Article 9;
  - b) consultations as provided for in Article 10 and Annex 4(1);
  - c) the application to peaceful nuclear activities of safeguards by the IAEA as provided for in Annex 2,
  - d) a complaints procedure as provided for in Annex 4.

#### Article 9 - Reports and Exchanges of Information

1. Each Party shall report to the Director of the South Pacific Bureau for Economic Co-operation (the Director) as soon as possible any significant event within its jurisdiction affecting the implementation of this Treaty. The Director shall circulate such reports promptly to all Parties.
2. The Parties shall endeavour to keep each other informed on matters arising under or in relation to this Treaty. They may exchange information by communicating it to the Director, who shall circulate it to all Parties.
3. The Director shall report annually to the South Pacific Forum on the status of this Treaty and matters arising under or in relation to it, incorporating reports and communications made under paragraphs 1 and 2 of this Article and matters arising under Articles 8(2)(d) and 10 and Annex 2(4).

#### Article 10 - Consultations and Review

Without prejudice to the conduct of consultations among Parties by other means, the Director, at the request of any Party, shall convene a meeting of the Consultative Committee established by Annex 3 for consultation and co-operation on any matter arising in relation to this Treaty or for reviewing its operation.

#### Article 11 - Amendment

The Consultative Committee shall consider proposals for amendment of the provisions of this Treaty proposed by any Party and circulated by the Director to all Parties not less than three months prior to the convening of the Consultative Committee for this purpose. Any proposal agreed upon by consensus by the Consultative Committee shall be communicated to the Director who shall circulate it for acceptance to all Parties. An amendment shall enter into force thirty days after receipt by the depositary of acceptances from all Parties.

#### Article 12 - Signature and Ratification

1. This Treaty shall be open for signature by any Member of the South Pacific Forum.
2. This Treaty shall be subject to ratification. Instruments of ratification shall be deposited with the Director who is hereby designated depositary of this Treaty and its Protocols.
3. If a Member of the South Pacific Forum whose territory is outside the South Pacific Nuclear Free Zone becomes a Party to this Treaty, Annex 1 shall be deemed to be amended so far as required to enclose at least the territory of that Party within the boundaries of the South Pacific Nuclear Free Zone. The delineation of any area added pursuant to this paragraph shall be approved by the South Pacific Forum.

#### Article 13 - Withdrawal

1. This Treaty is of a permanent nature and shall remain in force indefinitely, provided that in the event of a violation by any Party of a provision of this Treaty essential to the achievement of the objectives of the Treaty or of the spirit of the Treaty, every other Party shall have the right to withdraw from the Treaty.
2. Withdrawal shall be effected by giving notice twelve months in advance to the Director who shall circulate such notice to all other Parties.

#### Article 14 - Reservations

This Treaty shall not be subject to reservations.

#### Article 15 - Entry Into Force

1. This Treaty shall enter into force on the date of deposit of the eighth instrument of ratification.
2. For a Signatory which ratifies this Treaty after the date of deposit of the eighth instrument of ratification, the Treaty shall enter into force on the date of deposit of its instrument of ratification.

Article 16 - Depositary Functions

The depositary shall register this Treaty and its Protocols pursuant to Article 102 of the Charter of the United Nations and shall transmit certified copies of the Treaty and its Protocols to all Members of the South Pacific Forum and all States eligible to become Party to the Protocols to the Treaty and shall notify them of signatures and ratifications of the Treaty and its Protocols.

IN WITNESS WHEREOF the undersigned, being duly authorised by their Governments, have signed this Treaty.

DONE at \_\_\_\_\_, this \_\_\_\_\_ day of \_\_\_\_\_  
One thousand nine hundred and eighty-[five], in a single original in the English language\*.

\*  
\* \*

ANNEX 1

SOUTH PACIFIC NUCLEAR FREE ZONE

- A. The area bounded by a line
- 1) commencing at the point of intersection of the Equator by the maritime boundary between Indonesia and Papua New Guinea;
  - 2) running thence northerly along that maritime boundary to its intersection by the outer limit of the Exclusive Economic Zone of Papua New Guinea;
  - 3) thence generally north-easterly, easterly and south-easterly along that outer limit to its intersection by the Equator,
  - 4) thence east along the Equator to its intersection by the meridian of Longitude 163 degrees East,
  - 5) thence north along that meridian to its intersection by the parallel of Latitude 3 degrees North;

---

\* This Treaty was signed on 6th August 1985 by the Head of Government of Australia, the Cook Islands, the Fiji Islands, Kiribati, New Zealand, Niue, Tuvalu, and Western Samoa. (Note by the Secretariat.)

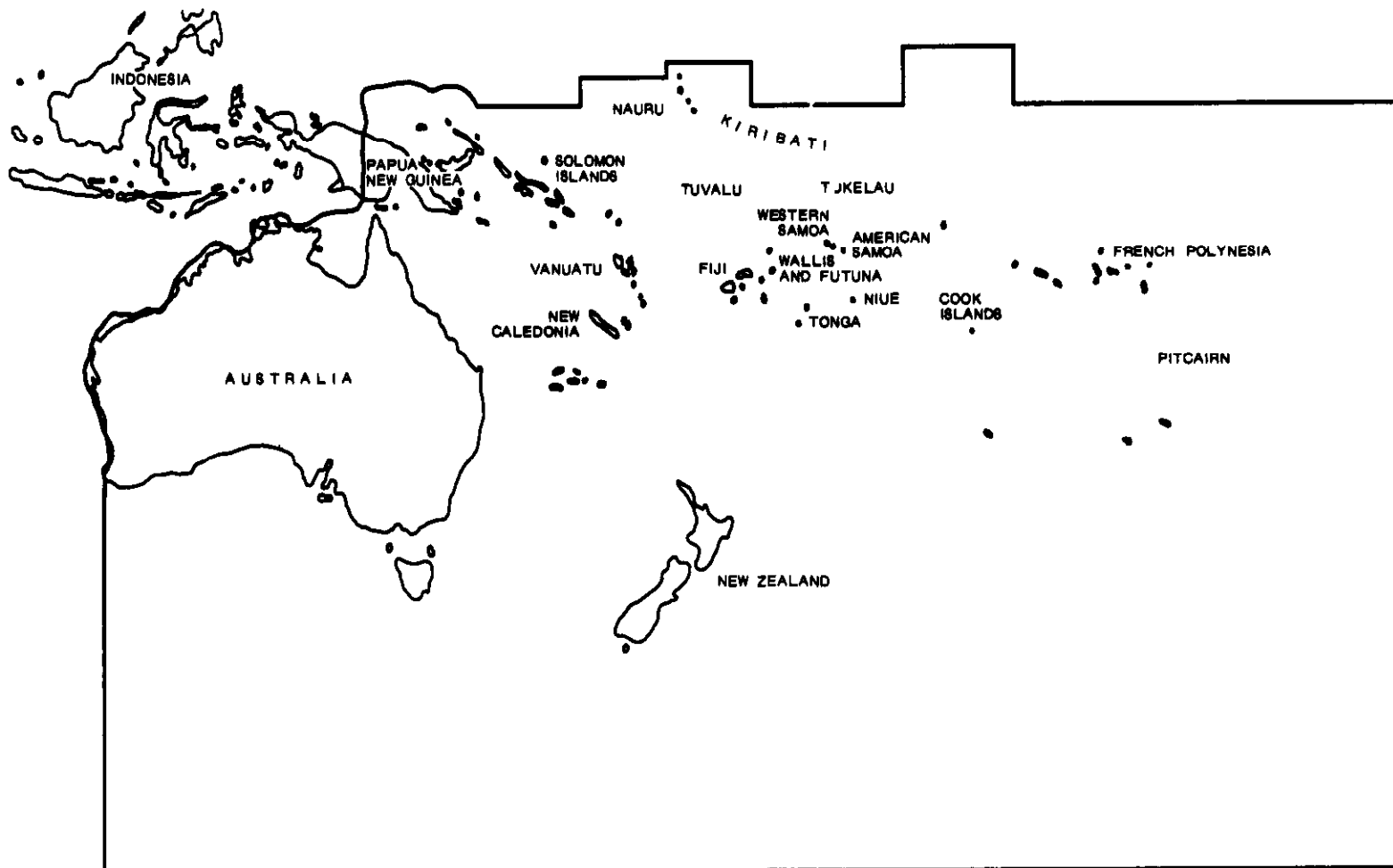
- 6) thence east along that parallel to its intersection by the meridian of Longitude 171 degrees East;
- 7) thence north along that meridian to its intersection by the parallel of Latitude 4 degrees North,
- 8) thence east along that parallel to its intersection by the meridian of Longitude 180 degrees East;
- 9) thence south along that meridian to its intersection by the Equator,
- 10) thence east along the Equator to its intersection by the meridian of Longitude 165 degrees West;
- 11) thence north along that meridian to its intersection by the parallel of Latitude 5 degrees 30 minutes North,
- 12) thence east along that parallel to its intersection by the meridian of Longitude 154 degrees West;
- 13) thence south along that meridian to its intersection by the Equator,
- 14) thence east along the Equator to its intersection by the meridian of Longitude 115 degrees West;
- 15) thence south along that meridian to its intersection by the parallel of Latitude 60 degrees South;
- 16) thence west along that parallel to its intersection by the meridian of Longitude 115 degrees East,
- 17) thence north along that meridian to its southermost intersection by the outer limit of the territorial sea of Australia,
- 18) thence generally northerly and easterly along the outer limit of the territorial sea of Australia to its intersection by the meridian of Longitude 136 degrees 45 minutes East,
- 19) thence north-easterly along the geodesic to the point of Latitude 10 degrees 50 minutes South, Longitude 139 degrees 12 minutes East;
- 20) thence north-easterly along the maritime boundary between Indonesia and Papua New Guinea to where it joins the land border between those two countries;
- 21) thence generally northerly along that land border to where it joins the maritime boundary between Indonesia and Papua New Guinea, on the northern coastline of Papua New Guinea, and
- 22) thence generally northerly along that boundary to the point of commencement.



B. The areas within the outer limits of the territorial seas of all Australian islands lying westward of the area described in paragraph A and north of Latitude 60 degrees South, provided that any such areas shall cease to be part of the South Pacific Nuclear Free Zone upon receipt by the depositary of written notice from the Government of Australia stating that the areas have become subject to another treaty having an object and purpose substantially the same as that of this Treaty.

ATTACHMENT TO ANNEX 1 TO THE SOUTH PACIFIC NUCLEAR FREE ZONE TREATY  
ILLUSTRATIVE MAP

[Australian Islands in the Indian Ocean which are also part of the Treaty are not shown]



ZONE OF APPLICATION OF THE TREATY FOR THE PROHIBITION  
OF NUCLEAR WEAPONS IN LATIN AMERICA

ANTARCTIC TREATY AREA

## ANNEX 2

### IAEA SAFEGUARDS

1. The safeguards referred to in Article 8 shall in respect of each Party be applied by the IAEA as set forth in an agreement negotiated and concluded with the IAEA on all source or special fissionable material in all peaceful nuclear activities within the territory of the Party, under its jurisdiction or carried out under its control anywhere.
2. The agreement referred to in paragraph 1 shall be, or shall be equivalent in its scope and effect to, an agreement required in connection with the NPT on the basis of the material reproduced in document INFCIRC/153 (Corrected) of the IAEA. Each Party shall take all appropriate steps to ensure that such an agreement is in force for it not later than eighteen months after the date of entry into force for that Party of this Treaty.
3. For the purposes of this Treaty, the safeguards referred to in paragraph 1 shall have as their purpose the verification of the non-diversion of nuclear material from peaceful nuclear activities to nuclear explosive devices.
4. Each Party agrees upon the request of any other Party to transmit to that Party and to the Director for the information of all Parties a copy of the overall conclusions of the most recent report by the IAEA on its inspection activities in the territory of the Party concerned, and to advise the Director promptly of any subsequent findings of the Board of Governors of the IAEA in relation to those conclusions for the information of all Parties.

## ANNEX 3

### CONSULTATIVE COMMITTEE

1. There is hereby established a Consultative Committee which shall be convened by the Director from time to time pursuant to Article 10 and 11 and Annex 4(2). The Consultative Committee shall be constituted of representatives of the Parties, each Party being entitled to appoint one representative who may be accompanied by advisers. Unless otherwise agreed, the Consultative Committee shall be chaired at any given meeting by the representative of the Party which last hosted the meeting of heads of Government of Members of the South Pacific Forum. A quorum shall be constituted by representatives of half the Parties. Subject to the provisions of Article 11, decisions of the Consultative Committee shall be taken by consensus or, failing consensus, by a two-thirds majority of those present and voting. The Consultative Committee shall adopt such other rules of procedure as it sees fit.
2. The costs of the Consultative Committee, including the costs of special inspections pursuant to Annex 4, shall be borne by the South Pacific Bureau for Economic Co-operation. It may seek special funding should this be required.

## ANNEX 4

### COMPLAINTS PROCEDURE

1. A Party which considers that there are grounds for a complaint that another Party is in breach of its obligations under this Treaty shall, before bringing such a complaint to the Director, bring the subject matter of the complaint to the attention of the Party complained of and shall allow the latter reasonable opportunity to provide it with an explanation and to resolve the matter.
2. If the matter is not so resolved, the complainant Party may bring the complaint to the Director with a request that the Consultative Committee be convened to consider it. Complaints shall be supported by an account of evidence of breach of obligations known to the complainant Party. Upon receipt of a complaint the Director shall convene the Consultative Committee as quickly as possible to consider it.
3. The Consultative Committee, taking account of efforts made under paragraph 1, shall afford the Party complained of a reasonable opportunity to provide it with an explanation of the matter.
4. If, after considering any explanation given to it by the representatives of the Party complained of, the Consultative Committee decides that there is sufficient substance in the complaint to warrant a special inspection in the territory of that Party or elsewhere, the Consultative Committee shall direct that such special inspection be made as quickly as possible by a special inspection team of three suitably qualified special inspectors appointed by the Consultative Committee in consultation with the complained of and complainant Parties, provided that no national of either Party shall serve on the special inspection team. If so requested by the Party complained of, the special inspection team shall be accompanied by representatives of that Party. Neither the right of consultation on the appointment of special inspectors, nor the right to accompany special inspectors, shall delay the work of the special inspection team.
5. In making a special inspection, special inspectors shall be subject to the direction only of the Consultative Committee and shall comply with such directives concerning tasks, objectives, confidentiality and procedures as may be decided upon by it. Directives shall take account of the legitimate interests of the Party complained of in complying with its other international obligations and commitments and shall not duplicate safeguards procedures to be undertaken by the IAEA pursuant to agreements referred to in Annex 2(1). The special inspectors shall discharge their duties with due respect for the laws of the Party complained of.
6. Each Party shall give to special inspectors full and free access to all information and places within its territory which may be relevant to enable the special inspectors to implement the directives given to them by the Consultative Committee.
7. The Party complained of shall take all appropriate steps to facilitate the special inspection, and shall grant to special inspectors privileges and immunities necessary for the performance of their functions, including

inviolability for all papers and documents and immunity from arrest, detention and legal process for acts done and words spoken and written, for the purpose of the special inspection.

8. The special inspectors shall report in writing as quickly as possible to the Consultative Committee, outlining their activities, setting out relevant facts and information as ascertained by them, with supporting evidence and documentation as appropriate, and stating their conclusions. The Consultative Committee shall report fully to all Members of the South Pacific Forum, giving its decision as to whether the Party complained of is in breach of its obligations under this Treaty.

9. If the Consultative Committee has decided that the Party complained of is in breach of its obligations under this Treaty, or at any time at the request of either the complainant or complained of Party, the Parties shall meet promptly at a meeting of the South Pacific Forum.

## PROTOCOL 1

The Parties to this Protocol

Noting the South Pacific Nuclear Free Zone Treaty (the Treaty)

Have Agreed as follows:

### Article 1

Each Party undertakes to apply, in respect of the territories for which it is internationally responsible situated within the South Pacific Nuclear Free Zone, the prohibitions contained in Articles 3, 5 and 6, insofar as they relate to the manufacture, stationing and testing of any nuclear explosive device within those territories, and the safeguards specified in Article 8(2)(c) and Annex 2 of the Treaty.

### Article 2

Each Party may, by written notification to the depositary, indicate its acceptance from the date of such notification of any alteration to its obligations under this Protocol brought about by the entry into force of an amendment of the Treaty pursuant to Article 11 of the Treaty

### Article 3

This Protocol shall be open for signature by France, the United Kingdom of Great Britain and Northern Ireland and the United States of America

### Article 4

This Protocol shall be subject to ratification

### Article 5

This Protocol shall enter into force for each State on the date of its deposit with the depositary of its instrument of ratification

## PROTOCOL 2

The Parties to this Protocol

Noting the South Pacific Nuclear Free Zone Treaty (the Treaty)

Have Agreed as follows:

### Article 1

Each Party undertakes not to contribute to any act which constitutes a violation of the Treaty or its Protocols by Parties to them.

### Article 2

Each Party further undertakes not to use or threaten to use any nuclear explosive device against:

- a) Parties to the Treaty; or
- b) any territory within the South Pacific Nuclear Free Zone for which a State that has become a Party to Protocol 1 is internationally responsible.

### Article 3

Each Party may, by written notification to the depositary, indicate its acceptance from the date of such notification of any alteration to its obligations under this Protocol brought about by the entry into force of an amendment to the Treaty pursuant to Article 11 of the Treaty or by the extension of the South Pacific Nuclear Free Zone pursuant to Article 12(3) of the Treaty.

### Article 4

This Protocol shall be open for signature by France, the People's Republic of China, the Union of Soviet Socialist Republics, the United Kingdom of Great Britain and Northern Ireland and the United States of America.

### Article 5

This Protocol shall be subject to ratification.

### Article 6

This Protocol shall enter into force for each State on the date of its deposit with the depositary of its instrument of ratification.

-----

## PROTOCOL 3

The Parties to this Protocol

Noting the South Pacific Nuclear Free Zone Treaty (the Treaty)

Have Agreed as follows:

### Article 1

Each Party undertakes not to test any nuclear explosive device anywhere within the South Pacific Nuclear Free Zone.

### Article 2

Each Party may, by written notification to the depositary, indicate its acceptance from the date of such notification of any alteration to its obligation under this Protocol brought about by the entry into force of an amendment to the Treaty pursuant to Article 11 of the Treaty or by the extension of the South Pacific Nuclear Free Zone pursuant to Article 12(3) of the Treaty.

### Article 3

The Protocol shall be open for signature by France, the People's Republic of China, the Union of Soviet Socialist Republics, the United Kingdom of Great Britain and Northern Ireland and the United States of America

### Article 4

This Protocol shall be subject to ratification

### Article 5

This Protocol shall enter into force for each State on the date of its deposit with the depositary of its instrument of ratification.



# BIBLIOGRAPHY

## • *France*

L'acceptabilité sociale des centrales nucléaires et les changements politiques du printemps 1981 en France; thesis for a doctorate by Jacques Viers, Paris University - I, 1985, 542 pages

This thesis for a doctorate was submitted on 4th July 1985 and examines the problems raised by public reaction to implementation of the nuclear power programme in France, in particular, in the context of the policy conducted by the Government following from the 1981 elections. The author notes two elements the expansion of the French nuclear power programme does not stop a fairly large proportion of the public from reacting negatively to this source of energy, and, on the other hand, the nuclear "dispute" has not resulted in impeding this plan significantly, contrary to what may be observed in most other industrialised countries having chosen the same option

As pointed out by Mr. Viers, the somewhat exceptional character of the French experience in this respect has frequently given rise to (sometimes envious) comparisons in various countries faced with the problem of public opposition. This may even seem paradoxical he noted, given that the electoral proposals of the Socialist Party included a considerably reduced nuclear programme in France.

The purpose of the thesis, therefore, is to analyse this phenomenon mainly in a legal and institutional context but it also draws upon sociology, psychology, history, etc. This is an in-depth study which covers the rise of the nuclear controversy prior to and after 1981 (Preliminary), the evolution of concertation on nuclear power plant siting (Part I) and the development of nuclear safety organisation (Part II).

A large part of the study is devoted to comparative law and it is most interesting to note how French regulations (particularly participation by the public in the nuclear power plant siting procedure) and jurisprudential practice in administrative courts are different from texts and procedures in various other countries, despite the fact that a number of recent texts in France aim to strengthen such mechanisms and encourage a certain decentralisation. The analysis also includes a detailed description of how nuclear safety is organised in France and the changes made in recent years.

This thesis by Jacques Viers, which is supplemented by voluminous documentation, will provide a useful tool for researchers and practitioners in the field of nuclear law as well as for all those interested in this phenomenon of society which continues to have a deep effect on public life.

## • *Italy*

Rassegna giuridica dell'energia elettrica, II, No. 2, April - June 1985,  
Giuffrè Editore, Milan, 287 pages

The April - June 1985 issue of this periodical reproduces the proceedings of a meeting on legal problems connected with the setting up of electricity-generating plants (thermal and nuclear), organised on 22nd-23rd April 1985 in Rome by the Rassegna itself in collaboration with the National Electricity Board (ENEL).

The papers presented deal with the administrative procedures required for constructing power plants and ways of simplifying them; urban problems raised by such constructions, and the involvement of local authorities in the siting and operation of power plants. The thorough discussions generated by the papers are also reproduced.

## • *United States*

The Nuclear Suppliers and Non Proliferation, International Policy Choices, by  
the Center for Strategic and International Studies, Georgetown University,  
Washington DC 1985, 255 pages

This book is the result of a seminar held in June 1984 on "Nuclear Suppliers and Nuclear Non Proliferation" which was sponsored by the Georgetown University Center for Strategic and International Studies and by other research and educational organisations. It is a compilation of papers and reports submitted by policy experts and government officials from several countries and provides an in-depth examination of the major supply issues in the perspective of the recently concluded NPT review conference.

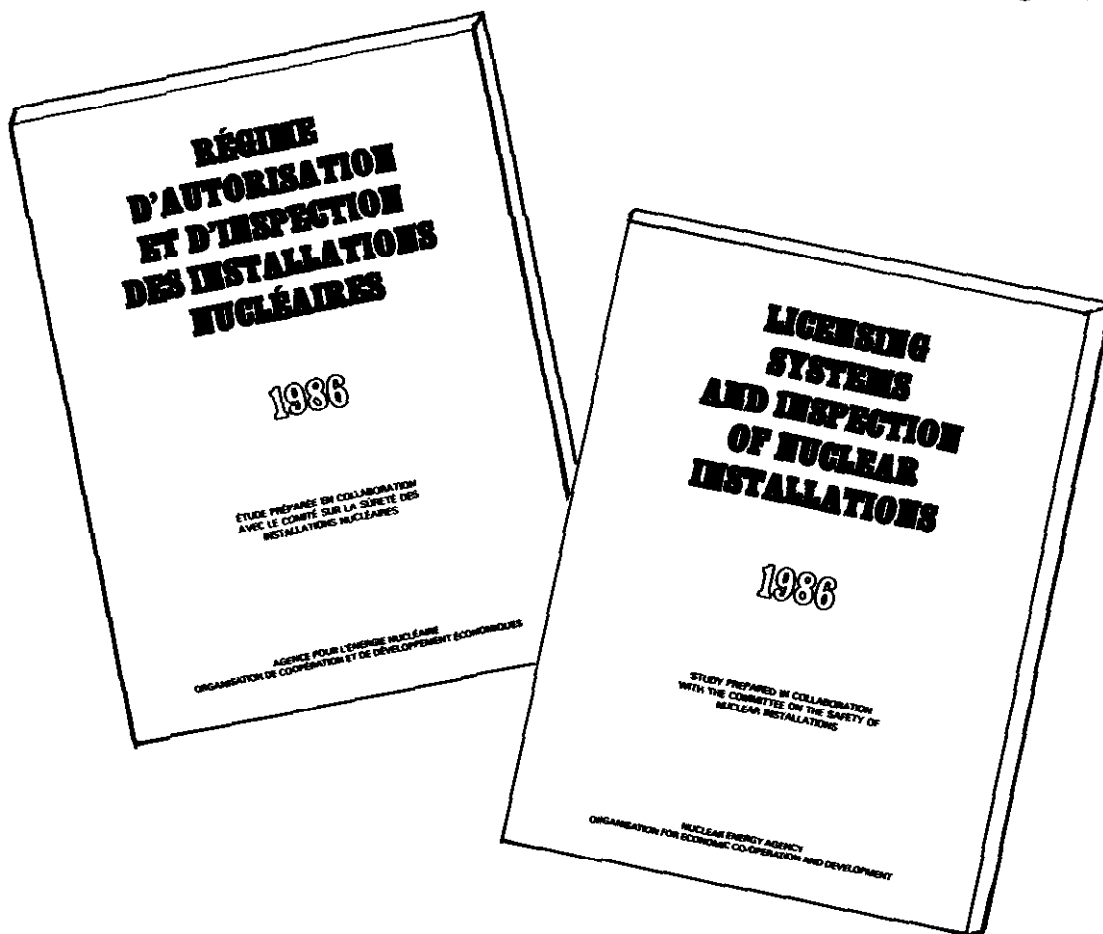
The reports analyse the problem confronting advanced supplier nations, of how to adhere to non-proliferation goals while guaranteeing a supply of nuclear technology to developing countries. The issue of "second tier" nuclear suppliers - new exporters of nuclear materials and technologies - is looked at from the point of view of the role that these suppliers will play in nuclear commerce and non-proliferation. Ways of strengthening the NPT regime, as well as for encouraging support, in particular among these "second-tier" suppliers, for controls embodied in the Nuclear Exporters' Committee and the Nuclear Suppliers' Group are examined.

The book's first three parts deal essentially with the issues mentioned above. Parts 4 and 5 look at industry-government co-operation and at the problem of supply issues linked to countries as of now uncommitted to the principles of the non-proliferation regime. The editors conclude the book with a highlight of the major issues which could have been expected to be discussed at the NPT review conference and stress the vital concern that all nuclear supplier countries should share in the strengthening of the existing non-proliferation regime.



***Vient de paraître***

***Just out***



This Study contains a description by country of the licensing procedure for nuclear installations and their system of inspection by the competent authorities. The Study covers twenty OECD Member countries.

Cette Etude contient une description, pays par pays, de la procédure d'autorisation à laquelle sont soumises les installations nucléaires ainsi que du régime d'inspection de ces mêmes installations par les autorités nationales compétentes. La présente Etude couvre vingt pays Membres de l'OCDE.



**OECD SALES AGENTS  
DÉPOSITAIRES DES PUBLICATIONS DE L'OCDE**

**ARGENTINA - ARGENTINE**

Carlos Hirsch S.R.L. Florida 165. 4° Piso (Galería Guemes)  
1332 BUENOS AIRES, Tel. 32.1787 2391 y 30.7122

**AUSTRALIA - AUSTRALIE**

D.A. Book (Aust.) Pty Ltd.  
11 13 Station Street (P.O. Box 163)  
MITCHAM, Vic. 3132. Tel. (03) 873 4411

**AUSTRIA - AUTRICHE**

OECD Publications and Information Center  
4 Simrockstrasse 5300 Bonn (Germany) Tel. (0228) 21 80 45  
Local Agents/Agents locaux  
Caroli and Co. Graben 31 WIEN 1 Tel. 52.22 35

**BELGIUM - BELGIQUE**

Jean De Lavey Service Publications OCDE  
avenue du Roi 202, B-1060 BRUXELLES. Tel. 02/638.51 69

**CANADA**

Routledge Publishing Company Limited/  
Éditions Routledge Lemelle Head Office/Siège social - Store/Magasin  
61 rue Spadina Street,  
OTTAWA, Ontario K1P 5A6, Tel. (613) 238-8985. 1-800-267-4184  
Store/Magasin: 211 rue Yonge Street,  
TORONTO Ontario M5B 1M4. Tel. (416) 363-3171

**Regional Sales Offices/  
Bureaux des ventes régionales**

7575 Trans-Canada Hwy. Suite 306  
SAINT-LAURENT Québec H4T 1V6 Tel. (514) 335-8274

**DENMARK - DANEMARK**

Munksgaard Export and Subscription Service  
35 Nørre Segade  
DK 1370 KØBENHAVN K. Tel. +45 1 12.85.70

**FINLAND - FINLANDE**

Akateemien Kirjallisuus  
Kaupunkatu 1 00100 HELSINKI 10. Tel. 65.11 22

**FRANCE**

OCDE, 2, rue André-Pascal, 75775 PARIS CEDEX 16  
Tel. (1) 45 24 82.00  
Librairie/Bookshop 23, rue Octave-Faullot,  
75016 PARIS. Tel. (1) 45 24 81.87 ou (1) 45.24.81 81  
Principal correspondent  
13802 AIX-EN-PROVENCE Librairie de l'Université.  
Tel. 42 26 18.08

**GERMANY - ALLEMAGNE**

OECD Publications and Information Center  
4 Simrockstrasse 5300 BONN Tel. (0228) 21 80 45

**GREECE - GRÈCE**

Librairie Kaufmann, 28 rue du Stade,  
ATHÈNES 132. Tel. 322.21 60

**HONG-KONG**

Government Information Services,  
Publications (Sales) Office,  
Desconfort House, 4/F.,  
Queen's Road Central

**ICELAND - ISLANDE**

Sinnýslýn Jónsson and Co. h.f.  
Hafnstraeti 4 and 9 P.O.B. 1131 REYKJAVIK  
Tel. 13133/14281/11936

**INDIA - INDE**

Oxford Book and Stationery Co.  
NEW DELHI-1 Scindia House. Tel. 45896  
CALCUTTA 700016 17 Park Street. Tel. 240832

**INDONESIA - INDONÉSIE**

PON-LPI, P.O. Box 3085/JKT JAKARTA. Tel. 583467

**IRELAND - IRLANDE**

TDC Publishers - Library Suppliers  
12 North Frederick Street, DUBLIN 1 Tel. 744835-748677

**ITALY - ITALIE**

Libreria Commerciana Sansoni  
Via Lamarmora 45 50121 FIRENZE. Tel. 579751/584468

Via Barcolana 29 20155 MILANO Tel. 365063

**Sub-depositari**

**Ugo Tassi**

Via A. Farinetti 28, 00192 ROMA. Tel. 310590

Edizione e Libreria Herder  
Piazza Montecitorio 120, 00186 ROMA. Tel. 6794628

Agenzia Libreria Pegaso,  
Via de Romita 5 70121 BARI. Tel. 540.105/540.195

Agenzia Libreria Pegaso, Via S. Anna dei Lombardi 16 80134 NAPOLI.  
Tel. 314180.

Libreria Hoepli, Via Hoepli 5 20121 MILANO. Tel. 865446

Libreria Scientifica, Dott. Lucio de Biasio "Aescu"  
Via Maravigli 16, 20123 MILANO Tel. 807879

Libreria Zanichelli  
Piazza Galvani 1/A, 40124 Bologna Tel. 237389

Libreria Lattes, Via Garibaldi 3 10122 TORINO. Tel. 519274

La diffusione delle edizioni OCSE è inoltre assicurata dalle migliori librerie nelle città più importanti.

**JAPAN - JAPON**

OECD Publications and Information Center  
Lands: Akasaka Bldg. 2-3-4 Akasaka  
Minato-ku, TOKYO 107 Tel. 586.2016

**KOREA - CORÉE**

Pan Korea Book Corporation,  
P.O. Box n° 101 Kwangwhamun, SÉOUL. Tel. 72 7369

**LEBANON - LIBAN**

Documents Scientifiques/Redico,  
Edson Building, Bliss Street, P.O. Box 5641 BEIRUT  
Tel. 354429 - 344425

**MALAYSIA - MALAISE**

University of Malaya Co-operative Bookshop Ltd.  
P.O. Box 1127 Jalan Pantai Baru  
KUALA LUMPUR. Tel. 577701/577072

**THE NETHERLANDS - PAYS-BAS**

Stationsgegevens, Wierdsma/Boekhandel,  
Chr. Pleinwegstraat 1 Postbus 20014  
2500 EA S-GRAVENHAGE. Tel. n° 070 789911  
Voor bestellingen: Tel. 070.789208

**NEW ZEALAND - NOUVELLE-ZÉLANDE**

Publications Section,  
Government Printing Office Bookshops:  
AUCKLAND: Retail Bookshop: 25 Rutland Street.  
Mail Orders: 95 Beech Road, Private Bag C.P.O.  
HAMILTON: Retail: Ward Street.  
Mail Orders, P.O. Box 857

WELLINGTON: Retail: Mulgrave Street (Head Office),  
Cubacade World Trade Centre  
Mail Orders: Private Bag

CHRISTCHURCH: Retail: 159 Hereford Street,  
Mail Orders: Private Bag

DUNEDIN: Retail: Princes Street  
Mail Order: P.O. Box 1104

**NORWAY - NORVÈGE**

Tenem-Karl Johan a.s.  
P.O. Box 1177 Sentrum, 0107 OSLO 1 Tel. (02) 80.12.60

**PAKISTAN**

Mirza Book Agency 65 Shahrah Qaud-E-Azam, LAHORE 3.  
Tel. 68839

**PORTUGAL**

Livraria Portugal, Rua do Carmo 70-74  
1117 LISBOA CODEX. Tel. 360682/3

**SINGAPORE - SINGAPOUR**

Information Publications Pte Ltd.  
Pan-Fu Industrial Building,  
24 Havelock Road #P 02-06  
SINGAPORE 1953 Tel. 2831786 2831796

**SPAIN - ESPAGNE**

Mundi-Praxeo Libros, S.A.  
Castelló 37 Apartado 1223 MADRID-28001 Tel. 431 33.99

Libreria Bosch, Ronda Unversidad 11 BARCELONA 7  
Tel. 317 53.08, 317 53.58

**SWEDEN - SUÈDE**

AB CE Fritzes Kungl. Hovbokhandel,  
Box 16 356, S 103 27 STH. Regementsgatan 12,  
DS STOCKHOLM. Tel. 08/23.88 00

Subscription Agency/Abonnemang:  
Wennergren-Williams AB,  
Box 30004 S104 25 STOCKHOLM. Tel. 08/54 12.00

**SWITZERLAND - SUISSE**

OECD Publications and Information Center  
4 Simrockstrasse 5300 BONN (Germany) Tel. (0228) 21 80 45

Local Agents/Agents locaux  
Libreria Payot, 6 rue Gramet, 1211 GENÈVE 11 Tel. 022.31 89 50

**TAIWAN - FORMOSE**

Good Faith Worldwide Int'l Co. Ltd.  
9th floor No. 118, Sec. 2,  
Chung Hsiao E. Road, TAIPEI. Tel. 391 7396/391 7397

**THAILAND - THAÏLANDE**

Sakset Siam Co. Ltd., 1715 Rama IV Rd,  
Samyan, BANGKOK 5 Tel. 2611630

**TURKEY - TURQUIE**

Kültür Yayınları İst-Türk Ltd. Şti.  
Atatürk Bulvarı No 191/Kat. 21  
Kızılay/ANKARA. Tel. 17 02 66

Dolmabahçe Cad. No 29  
BEŞİKTAŞ/İSTANBUL. Tel. 80 71 86

**UNITED KINGDOM - ROYAUME-UNI**

H.M. Stationery Office,  
P.O. B. 276 LONDON SW8 5DT  
(postal orders only)  
Telephone orders: (01) 622.3316 or  
49 High Holborn, LONDON WC1V 6HB (personal callers)

Branches at: EDINBURGH BIRMINGHAM BRISTOL,  
MANCHESTER, BELFAST

**UNITED STATES OF AMERICA - ÉTATS-UNIS**

OECD Publications and Information Center Suite 1207  
1750 Pennsylvania Ave. N.W. WASHINGTON, D.C. 20006 - 4582  
Tel. (202) 724.1867

**VENEZUELA**

Libreria del Este, Avda. F. Miranda 52, Edificio Galipan,  
CARACAS 106. Tel. 32.23.01/33.26 04/31 58.38

**YUGOSLAVIA - YOUGO-SLAVIE**

Jugoslovenska Knjiga, Knez Mihajlova 2, P.O.B. 36 BEOGRAD  
Tel. 621 992

Les commandes provenant de pays où l'OCDE n'a pas encore désigné de dépositaire peuvent être adressées à  
OCDE Bureau des Publications, 2 rue André-Pascal, 75775 PARIS CEDEX 16  
Orders and inquiries from countries where sales agents have not yet been appointed may be sent to:  
OECD Publications Office, 2 rue André-Pascal, 75775 PARIS CEDEX 16

**OECD PUBLICATIONS, 2, rue André-Pascal, 75775 PARIS CEDEX 16 No. 43451 1985**  
**PRINTED IN FRANCE**  
**(87 85 38 1) ISSN 0304-341X**



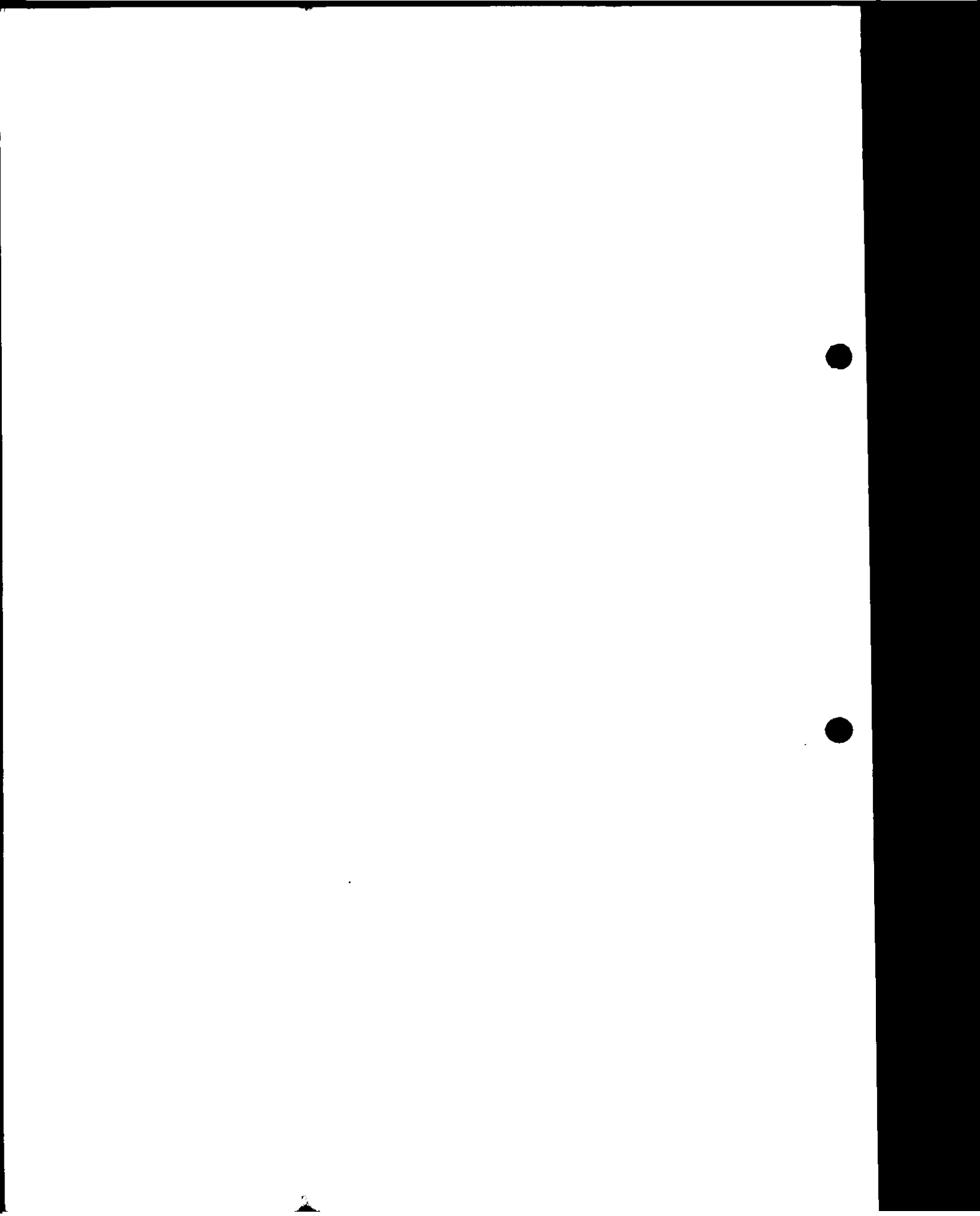
# NUCLEAR LAW

## Bulletin

S U P P L E M E N T T O N ° 36

- |    |                                |  |    |
|----|--------------------------------|--|----|
| 1. | FEDERAL REPUBLIC<br>OF GERMANY | ACT ON PEACEFUL USES OF ATOMIC ENERGY AND<br>PROTECTION AGAINST ITS HAZARDS (ATOMIC<br>ENERGY ACT) AS AT 1st AUGUST 1985 | 3  |
| 2. | YUGOSLAVIA                     | ACT OF 21ST NOVEMBER 1984 ON RADIATION<br>PROTECTION AND THE SAFE USE OF NUCLEAR ENERGY                                  | 39 |

December 1985



# *Federal Republic of Germany*

## Publication of the amended text of the Atomic Energy Act

Note by the Minister of the Interior, dated 15th July 1985

Pursuant to Section 2 of the Act to amend the liability provisions of the Atomic Energy Act of 22nd May 1985 (BGB1 I page 781) the text of the Atomic Energy Act applicable from 1st August 1985 is set out below. The Atomic Energy Act first came into force on 1st January 1960, except in Berlin where Sections 40 to 52 did not apply until 20th October 1961. The new text incorporates:

1. The text as published on 31st October 1976 (BGB1 I page 3 053);
2. Section 9 No. 13 of the Act of 3rd December 1976 in force from 1st July 1977 (BGB1 I page 3 281);
3. Section 14 of the Act of 28th March 1980 in force from 1st July 1980 (BGB1 I page 373);
4. Section 1 of the Act of 20th August 1980 in force from 29th August 1980 (BGB1 I page 1 556);
5. Section 1 of the first above-mentioned Act in force from 1st August 1985.

**ACT ON THE PEACEFUL USES OF ATOMIC ENERGY  
AND PROTECTION AGAINST ITS HAZARDS (ATOMIC ENERGY ACT)\***

as at 1st August 1985

**C H A P T E R I**

**GENERAL**

**Section 1 - Purpose of the Act**

It is the purpose of this Act:

1. To further nuclear research and development and the use of nuclear energy for peaceful purposes;
2. To protect life, health, and property from the hazards of nuclear energy and from the harmful effects of ionizing radiation, and to provide compensation for damage caused by nuclear energy or ionizing radiation;
3. To prevent danger to the internal or external security of the Federal Republic arising from the use or the release of nuclear energy;
4. To enable the Federal Republic to meet its international obligations in the field of nuclear energy and protection against radiation.

**Section 2 - Definitions**

- (1) "Radioactive substances" for the purposes of this Act shall mean:
1. special fissionable material (nuclear fuel) in the form of
    - (a) Plutonium 239 and plutonium 241;
    - (b) Uranium 233;
    - (c) Uranium enriched in the isotopes 235 or 233;
    - (d) Any substance containing one or more of the aforesaid substances;
    - (e) Uranium and substances containing uranium of the natural isotopic mixture of such purity as to enable a continuous self-sustaining chain reaction to be maintained in a suitable installation (reactor).

---

\* Unofficial translation by the Secretariat.

The term "uranium enriched in the isotopes 235 or 233" means uranium containing the isotopes 235 or 233 or both in such quantity that the ratio of the sum of these two isotopes to the isotope 238 is greater than the ratio of the isotope 235 to the isotope 238 occurring in nature.

2. Substances which, without being nuclear fuel, emit ionizing radiation spontaneously (other radioactive substances).
- (2) Radioactive waste which does not have to be delivered to installations under Section 9a(3) and for which, on account of its low activity, no disposal to protect life, health and property from the hazards of nuclear energy and the harmful effects of ionizing radiation under Section 9a(2) second sentence is specified, ordered or permitted, shall not be radioactive substances for the purposes of this Act.
- (3) For the application of the provisions on liability and financial security, the terms "nuclear incident", "nuclear installation", "operator of a nuclear installation", "nuclear substances" and "special drawing rights" shall have the meaning given to them in Annex 1 of this Act.
- (4) "Paris Convention" means the Convention of 29th July 1960 on Third Party Liability in the Field of Nuclear Energy as published on 5th February 1976 (BGBI II page 310, 311) and the Protocol of 16th November 1982 (BGBI 1985 II page 690).
- (5) "Brussels Supplementary Convention" means the Convention of 31st January 1963 supplementary to the Paris Convention as published on 5th February 1976 (BGBI II page 310, 318) and the Protocol of 16th November 1982 (BGBI 1985 II page 690).

## C H A P T E R   I I

### C O N T R O L

#### Section 3 - Import and export

- (1) Any person who imports or exports nuclear fuel shall require a licence.
- (2) An import licence shall be granted, provided that
  1. there are no known facts giving rise to any doubts as to the reliability of the importer, and
  2. it is ensured that the nuclear fuel to be imported will be used in conformity with the provisions of this Act, regulations made thereunder, and the international obligations of the Federal Republic in the field of nuclear energy.
- (3) An export licence shall be granted, provided that

1. there are no known facts giving rise to any doubts as to the reliability of the exporter, and
2. it is ensured that the nuclear fuel to be exported will not be used in such a way as to jeopardise the international obligations of the Federal Republic in the field of nuclear energy, or the internal or external security of the Federal Republic.

(4) Nothing herein contained shall affect any other legal provisions on import or export.

(5) Any form of shipment into or out of the area of application of this Act shall be deemed an import or export within the meaning of this Act.

#### Section 4 - Carriage of nuclear fuel

(1) The carriage of nuclear fuel outside an enclosed area where nuclear fuel is kept in Government custody or where activities under Sections 6, 7 and 9 are being carried out, shall require a licence. Such licence shall be granted to the consignor or the person undertaking the consignment or carriage of the nuclear fuel.

(2) A licence shall be granted, provided that

1. there are no known facts giving rise to any doubts as to the reliability of the applicant, the carrier and the persons actually effecting the carriage,
2. such carriage is effected by persons who, with respect to the planned carriage of nuclear fuel, possess the requisite knowledge of the possible radiation hazards and the safety measures to be applied,
3. the nuclear fuel is carried in conformity with such legal provisions on the carriage of dangerous goods as are applicable to the particular carrier concerned or, in the absence of such provisions, that otherwise every precaution which is necessary in the light of existing scientific knowledge and technology has been taken in order to prevent damage resulting from the carriage of nuclear fuel,
4. the necessary financial security has been provided to cover all legal liability to pay compensation for damage,
5. all necessary protection is provided against disturbance or other interference by third parties,
6. the choice of the mode, time and route of the carriage are not contrary to overriding public interests.

(3) Financial security to cover legal liability to pay compensation for damage required pursuant to sub-section (2) No. 4 shall not be necessary for carriage of the nuclear fuel specified in Annex 2 to this Act.

(4) The licence shall be granted separately for each transport operation; it may, however, be granted to an applicant for a period not exceeding three years, provided that this is not contrary to the purposes specified in Section 1 (2) to (4).

(5) The duplicate or a certified copy of the licence shall be available during carriage. Furthermore, the carrier shall carry a certificate which meets the requirements of Article 4(c) of the Paris Convention unless, pursuant to sub-section 3, financial security is not required for the carriage in question. The licence and the certificate shall be produced at the request of the competent control authority and its duly authorised agents.

(6) The first sentence of sub-section 5 shall not apply to carriage by rail by a railway operator. In general no provision of this Act shall affect any legal provisions applicable to carriers and the carriage of dangerous goods.

#### Section 4a - Financial security in cases of transborder carriage

(1) Subject to sub-sections 3 and 4, the financial security required under No. 4 of Section 4 (2) shall be deemed to be provided in the case of transborder carriage where the certificate required under Article 4 (c) of the Paris Convention relates to an operator of a nuclear installation situated in a Contracting State to the Paris Convention.

(2) "Insurer" within the meaning of Article 4 (c) of the Paris Convention shall mean:

1. an insurer licensed to carry on business within the area of application of this Act;
2. an insurer licensed outside the area of application of this Act, provided that an insurer licensed within the area of application of this Act or an association of such insurers undertakes jointly to assume the obligations of third party liability insurer.

Some other form of financial security may be accepted in lieu of insurance where it is established that the person required to provide security is in a position to meet his legal obligation to pay compensation for damage up to the specified amount of security for so long as it is to be expected that claims may be raised against him.

(3) If the Brussels Supplementary Convention is not yet in force for a Contracting State to the Paris Convention, the granting of a licence pursuant to Section 4 for the transit of nuclear fuel may be made subject to the condition that the maximum liability of the operator of a nuclear installation provided for in such Contracting State may be increased with respect to nuclear incidents occurring during carriage within the area of application of this Act to the extent required by the quantity and nature of the nuclear fuel and the safety measures applied. The operator of the nuclear installation shall be required to furnish proof of the financial security thus increased by producing a certificate issued by the competent authority of such Contracting State.

(4) In case of import or export of nuclear fuel into or from another Contracting State to the Paris Convention for which the Brussels Supplementary Convention is not in force, the licence pursuant to Section 4 may be made subject to the condition that the operator of the nuclear installation situated within the area of application of this Act to or from whom the nuclear fuel is to be carried undertakes to assume liability, in accordance with the provisions of this Act, for nuclear incidents occurring during carriage within the area of application of this Act, if the maximum liability provided for in the other Contracting State to the Paris Convention is not adequate in view of the amount and nature of the nuclear fuel and the safety measures applied.

#### Section 4b - Transport of nuclear substances in special cases

(1) Any person who carries nuclear substances without requiring a licence pursuant to Section 4, shall furnish proof to the competent authority, before commencement of the carriage, that the financial security required to cover legal liability to pay compensation has been obtained. If such financial security is insufficient, the authority shall fix the necessary amount in accordance with the principles laid down in Section 13 (2) No. 1. Section 4 (5) second and third sentences and Section 4a shall apply.

(2) Sub-section 1 shall not apply in the case of carriage of those nuclear substances specified in Annex 2 to this Act.

#### Section 5 - Custody, possession and surrender of nuclear fuel

(1) Nuclear fuel shall be kept in government custody. Such precautions as are necessary in the light of existing scientific knowledge and technology shall be taken to prevent damage resulting therefrom, and the necessary protection shall be provided against disturbance or other interference by third parties.

(2) No person shall be permitted to have nuclear fuel in his immediate possession outside government custody, unless he

1. stores nuclear fuel by virtue of a licence granted under Section 6,
2. treats, processes or otherwise uses nuclear fuel in an installation licensed under Section 7, or by virtue of a licence granted under Section 9,
3. is entitled under Section 4.

(3) Any person who is in immediate possession of nuclear fuel, without being authorised under sub-section 2, shall surrender it to the custodial authority without delay.

(4) The obligation to surrender nuclear fuel shall cease to apply if the fuel is transferred to a carrier licensed under Section 4,

1. for the purpose of an export licensed under Section 3, or



2. for the purpose of delivery to a consignee licensed under sub-section 2 No. 1 or 2.
- (5) Nuclear fuel in government custody under sub-section 1, or in licensed storage under Section 6 shall be released only if
1. the consignee is authorised to have nuclear fuel in his possession under sub-section 2 No. 1 or 2,
  2. nuclear fuel is to be carried, for the purpose of export, under a licence pursuant to Section 4.
- (6) Sub-sections 1 to 5 shall not apply to nuclear fuels contained in radioactive waste.

#### Section 6 - Licences for the storage of nuclear fuel

- (1) Any person who stores nuclear fuel outside government custody shall require a licence.
- (2) A licence shall be granted if there is need for such storage, provided
  1. there are no known facts giving rise to any doubts as to the reliability of the applicant or of the persons responsible for administration and control of the storage, and such latter persons possess the requisite specialised knowledge,
  2. every necessary precaution has been taken in the light of existing scientific knowledge and technology to prevent damage resulting from such storage,
  3. the necessary financial security has been provided to cover all legal liability to pay compensation for damage,
  4. all necessary protection is provided against disturbance or other interference by third parties.

#### Section 7 - Licences for installations

- (1) Any person who constructs, operates or otherwise holds a stationary installation for the production, treatment, processing or fission of nuclear fuel, or for the reprocessing of irradiated nuclear fuel, or who materially alters such installation, or its operation, shall require a licence.
- (2) A licence may be granted only if
  1. there are no known facts giving rise to any doubts as to the reliability of the applicant and of the persons responsible for the construction and management of the installation and the control of its operation, and such latter persons possess the requisite specialised knowledge,

2. the persons who are otherwise engaged in the operation of the installation possess the necessary knowledge concerning the safe operation of the installation, the possible hazards and the safety measures to be applied,
3. every necessary precaution has been taken in the light of existing scientific knowledge and technology to prevent damage resulting from construction and operation of the installation,
4. the necessary financial security has been provided to cover all legal liability to pay compensation for damage,
5. all necessary protection is provided against disturbance or other interference by third parties,
6. the choice of the site of the installation, in particular with respect to non-contamination of water, air and soil, is not contrary to overriding public interests.

(3) The decommissioning of an installation licensed under sub-section 1 and the secure sealing of definitively closed installations or the dismantling of the installation or components of installations shall require a licence. Sub-section 2 shall apply as appropriate. A licence under sentence 1 shall not be required where the proposed steps are already the subject of a licence under sub-section 1 or an order under Section 19(3).

(4) All authorities of the Bund, the Länder, local authorities and other regional authorities whose jurisdiction is involved shall take part in the licensing procedure. In the case of a difference of opinion between the licensing authority and any federal authority concerned, the licensing authority shall obtain instructions from the Federal Minister competent for nuclear safety and radiation protection. In all other respects, the licensing procedure shall be governed by regulations made in accordance with the principles laid down in Sections 8, 10(1) to (4) and (6) to (8) and Section 18 of the Federal Act on Protection against Nuisances of 15th March 1974 (BGBl I page 721).

(5) Sub-sections 1, 2 and 4 shall apply *mutatis mutandis* to non-stationary installations. However, the regulations referred to in the third sentence of sub-section 4 may provide that the project shall not be publicly announced and that the documents shall not be made available for public inspection and that in such case there shall be no oral hearing of objections.

(6) Section 14 of the Federal Act on Protection against Nuisances shall apply as appropriate if other premises are affected by a licensed installation.

#### Section 7a - Provisional decision

(1) Upon application a provisional decision may be rendered with respect to separate questions which are conditional for the granting of a licence for an installation pursuant to Section 7, in particular with respect to the choice of the site. The provisional decision shall become invalid if the applicant

does not apply for the licence within two years from the date on which such decision has become final; upon application, this period may be extended for up to a further two years.

(2) Section 7(3) and (4) and Sections 17 and 18 shall apply mutatis mutandis.

Section 7b - Objections by third parties to partial licences and provisional decisions

Where a decision has been given in an application for a partial licence or for a provisional decision under Section 7 or Section 7a, and has become final, third parties shall be precluded, in any further licensing procedure, from intervening on the basis of facts which had already been presented or which such parties could have presented in view of the documents or the decision laid open for public inspection.

Section 8 - Relation to the Federal Act on Protection against Nuisances and the Trading and Industrial Code

(1) The provisions of the Federal Act on the Protection against Nuisances concerning installations requiring a licence and the prohibition of the further operation of such installations, shall not apply to installations requiring a licence pursuant to Section 7 as regards protection against the hazards of nuclear energy and the harmful effects of ionizing radiation.

(2) If an installation requires a licence under Section 4 of the Federal Act on Protection against Nuisances, as well as under Section 7 of this Act, the latter licence shall include the former. The nuclear licensing authority shall reach its decision in agreement with the authority of the Land responsible for protection against nuisances and in compliance with the provisions of the Federal Act on Protection against Nuisances and regulations made thereunder.

(3) With respect to installations subject to control under Section 24 of the Trading and Industrial Code which are used in installations requiring a licence under Section 7, the licensing authority may grant exemption, on a case-by-case basis, from the legal provisions made under Article 24 of the Trading and Industrial Code, if such exemption is warranted by the special technical character of the installation subject to Section 7.

Section 9 - Treatment, processing and other uses of nuclear fuel outside of installations requiring a licence

(1) Any person who treats, processes or otherwise uses nuclear fuel outside of installations specified in Section 7 shall require a licence. Furthermore, a licence shall be required by any person who applies a method of treating, processing or otherwise using nuclear fuel in a way materially different from that specified in the licence, or who materially alters the installation or its location as specified in the licence.

(2) A licence may be granted only if

1. there are no known facts giving rise to any doubts as to the reliability of the applicant or of the persons responsible for the administration and control of the use of nuclear fuel, and such persons possess the requisite expert knowledge,
2. the persons otherwise engaged in the intended use of nuclear fuel have the requisite knowledge of the possible hazards and safety measures to be applied,
3. every necessary precaution has been taken in the light of existing scientific knowledge and technology to prevent damage resulting from the use of nuclear energy,
4. the necessary financial security has been provided to cover all legal liability to pay compensation for damage,
5. all necessary protection is provided against disturbance or other interference by third parties,
6. the choice of place where the nuclear fuel is to be used is not contrary to overriding public interests, in particular with respect to non-contamination of water, air and soil.

Section 9a - Use of radioactive by-products and disposal of radioactive waste

(1) Any person who constructs, operates, otherwise holds, materially alters, closes or disposes of installations within which nuclear fuels are handled, or handles radioactive substances outside such installations or operates installations for the production of ionizing radiation shall ensure that resulting radioactive by-products or removed or dismantled radioactive components of installations

1. are used in a safe way in accordance with the aims specified in Section 1 Nos. 2 to 4,
2. to the extent that this is not possible in the current state of science and technology, is scientifically not feasible or is incompatible with the aims set out in Section 1 Nos. 2 to 4, are properly disposed of as radioactive waste.

(2) Any person in possession of radioactive waste shall deliver it to an installation specified in sub-section 3. This shall not apply where there is provision to the contrary in a regulation made under this Act or where ordered or allowed under this Act or such regulation.

(3) The Länder shall establish collection points for the intermediate storage of radioactive waste generated within their areas and the Bund shall establish installations for the safekeeping and final disposal of radioactive waste. These authorities may make use of the services of third parties in fulfilment of these obligations.

Section 9b - Planning procedures

(1) The construction and operation of Federal installations referred to in Section 9a(3) and material alterations to such installations or their operation shall require planning permission.

(2) Planning permission may be limited to the attainment of the objectives specified in Section 1 and may be subject to conditions. Where necessary for the attainment of the objectives specified in Section 1 Nos. 2 to 4, subsequent conditions may be imposed.

(3) Planning permission shall only be granted when the conditions referred to in Section 7(2) Nos. 1 to 3, 5 and 6 have been met. Planning permission shall be refused where

1. the construction or operation of the proposed installation is likely to prejudice the welfare of the community in ways which cannot be prevented by imposing restrictions or conditions, or
2. construction or operation of the installation is contrary to other public law provisions.

(4) Where as a result of planning permission being granted, prejudice is caused to the rights of a third party which cannot be either prevented or remedied by means of restrictions or conditions, the person concerned shall be paid compensation in money for the prejudice he has suffered.

(5) Sections 21 to 29 of the Waste Disposal Act shall apply to the planning procedure provided that:

1. publication of the proposal and the date of the hearing, the making of the plan available for public inspection, the examination of objections, the hearing and the service of decisions are in accordance with the regulation made under Section 7(4) third sentence;
2. prior to a reserved decision the publication and public deposit of documents submitted may be dispensed with where such publication and deposit would disclose no further information of relevance to third parties;
3. the planning decision does not cover the admissibility of the proposal under provisions of mining and deep storage legislation. Such matters shall be decided by the competent authorities.

Section 9c

Construction and operation of the Land collection points referred to in Section 9a(3) and material alterations to such installations or their operation shall require a licence under Section 9 of this Act or under Section 3 of the Radiation Protection Regulations issued by the competent authorities.

## Section 10

By regulation, exceptions may be made to the provisions of Sections 3 to 7 and Section 9, where owing to the quantity or nature of nuclear fuels or specified protection measures or protective installations, there is no likelihood of damage due to a self-sustaining chain reaction or effects of ionizing radiation and provided there is no conflict with the objectives set out in Section 1 Nos. 3 and 4.

## Section 11 - Enabling provisions (licence, notification, general permission)

(1) Where no specific regulation has been made under this Act for nuclear fuels and for installations within the meaning of Section 7, regulations to achieve the objectives set out in Section 1 may specify,

1. that prospecting for or handling of radioactive substances (extraction, production, storage, treatment, processing or any other use or disposal), transactions in radioactive substances (acquisition, or delivery to others), the carriage and import or export of such substances shall require a licence or notification,
2. that the construction or operation of an installation for the production of ionizing radiation shall require a licence or notification,
3. that a general permit may be issued for installation, apparatus and equipment containing radioactive substances or producing ionizing radiation after their design and construction have been examined by an authority to be specified in such regulation, which shall also specify the notifications to be made by the operators of such installation, apparatus and equipment,
4. that components of the installation of importance from the safety standpoint, production of which is to be commenced before submission of the application or grant of a licence, shall only be incorporated in installations under Section 7(1) where there is a justified interest in such early production and where it is established in a test procedure that materials, design, manufacture and finishing fulfil the conditions in Section 7(2) No. 3, as well as, which authority is responsible for the procedure, what documents are to be submitted and what are the legal consequences of the licensing of the works to be undertaken in advance,
5. that radioactive substances shall not be used in certain ways or for specified purposes to the extent that such prohibition is required to protect the lives and health of the population from the hazards of radioactive substances or to give effect to decisions of international organisations of which the Federal Republic of Germany is a member.

(2) The regulation may make the granting of licences and general permits subject to personal and objective conditions within the framework of this Act, and may regulate the procedure for such licences and general permits.

Section 12 - Enabling provisions (safety measures)

(1) To achieve the purposes specified in Section 1, the following may be provided by regulation

1. the precautionary and control measures to be taken for the protection of individuals and the general public in regard to the handling of and transactions in radioactive substances, the construction, operation and possession of installations as specified in Section 7 and Section 11(1) No. 2, the handling of and transactions in installations, apparatus and equipment as specified in Section 11(1) No. 3,
2. the precautions to be taken in order to ensure that specified radiation doses and concentrations of radioactive substances in air and water are not exceeded,
3. that no person shall be employed in areas exposed to radiation hazards unless he produces a certificate issued by a specially authorised medical practitioner, and that if any objections be raised to such employment for reasons of health, the supervisory authority shall decide after consulting medical experts,
4. that persons who stay or have been staying in areas exposed to radiation hazards shall be required, where specified, to have the radiation doses at their bodies measured, to undergo medical examination and, insofar as the protection of other individuals or the general public so requires, to undergo medical treatment, such examination or treatment being undertaken by specially authorised medical practitioners,
5. that, as specified, records shall be kept and reports submitted on the production, extraction, acquisition, possession, delivery and location of radioactive substances, as well as on the measurement of doses and dose rates of ionizing radiation,
6. that, how, and to what extent, the operator of an installation in which radioactive substances are handled or are to be handled, is obliged to report to the supervisory authority whether and what variations have occurred to the particulars contained in the licence application including supporting documents or from the licence,
7. that significant variations from the safety standpoint to authorised operation, in particular accidents and other damage occurring in handling radioactive substances, on construction or operation of installations, in which radioactive substances are handled, or on handling installations, apparatus and equipment of the type specified in Section 11(1) No. 3 shall be notified to the supervisory authority and when and how the knowledge so gained, excluding data concerning specific individuals and circumstances, is to be published by agencies to be specified in the regulation for the purpose of improving safety precautions,

8. what radioactive waste is to be delivered to the Land collection points and to the Federal installations under Section 9a(3) and that having regard to the scale of the hazard associated therewith, under specified conditions further intermediate storage or other exemption from the obligation of delivery shall be permitted or may be directed or allowed,
9. how delivery is to be carried out, what requirements radioactive waste must meet on delivery, how radioactive waste is to be secured and stored in the Land collection points and Federal installations, how and when radioactive waste is to be removed from the Land collection points to Federal installations and how installations under Section 9a(3) are to be supervised,
10. how the protection of radioactive substances and of installations under Sections 7 and 11(1) No. 2 is to be guaranteed against interference or other acts by third parties,
11. the requirements in regard to training, professional knowledge and skills as well as the reliability and impartiality of experts nominated under Section 20 and the conditions with regard to the technical facilities and co-operation by persons active in different branches of studies that organisations must fulfil if they are to act as experts for the purposes of Section 20.
12. the requirements in regard to the necessary skills of the persons responsible for the construction, management and supervision of the operation of installations under Section 7 and the necessary knowledge of persons otherwise active in the operation of installations under Section 7, evidence required in relation hereto, and how the licensing and supervisory authority under Section 24 is to check whether the necessary specialised skills or knowledge exist,
13. that the supervisory authority may issue directions for the implementation of any provision made under Nos. 1 to 10.

Nos. 1 and 7 above shall apply *mutatis mutandis* to the carriage of radioactive substances to the extent that the purposes stated in Section 1 Nos. 1, 3 and 4 are to be achieved.

(2) The fundamental right to physical inviolability (Article 2(2) first sentence of the Basic Law) shall be curtailed as required under No. 4 above.

#### Section 12a - Enabling provision (Decision of the Steering Committee)

The Federal Government shall be authorised, with the consent of the Federal Council, to implement by regulation decisions of the Steering Committee of the European Nuclear Energy Agency, or its successor, pursuant to Article 1(a)(ii) and (iii) and Article 1(b) of the Paris Convention, as well as to amend or repeal Nos. 2 and 3 of sub-section 1 of Annex 1 and Annex 2 of this Act, if this is necessary to fulfil the purposes stated in Section 1 of this Act.



Section 13 - Financial security to cover legal liability to pay compensation for damage

(1) In the licensing procedure, the administrative authority shall determine the type, terms and amount of financial security to be provided by the applicant to cover his legal liability to pay compensation for damage. Such determination shall be renewed every two years and in the event of any material change in circumstances; the administrative authority shall in so doing prescribe an appropriate time limit within which the person obliged to provide financial security must furnish proof that he has done so.

(2) The financial security under sub-section 1 shall

1. in the case of installations and activities involving liability under the Paris Convention taken with Section 25(1) to (4), under Section 25a or under an international agreement referred to in Section 25a(2), be in due proportion to the hazards of the installation or activities,
2. in the case of other activities requiring a licence under this Act or regulation made thereunder, ensure fulfilment of the legal liability to pay compensation for damage to the extent appropriate to the circumstances.

(3) Within the limits laid down by sub-section 2, and in order to achieve the purposes specified in Section 1, more detailed provisions may be made by regulation concerning measures to guarantee fulfilment of the legal liability to pay compensation for damage. The amount of the financial security shall be fixed subject to an upper limit of DM 500 million; the upper limit and the amounts of financial security shall be reviewed once every five years with a view to maintaining the real value of the financial security.

(4) The Bund (with the exception of the Federal German Railways in the case of carriage by public transport) and the Länder shall not be required to provide financial security. Insofar as a Land may be held liable under the Paris Convention and Section 25(1) to (4), under Section 25a or under an international agreement referred to in Section 25a (2), the licensing authority in applying mutatis mutandis sub-sections 1 and 2 and the regulation made under sub-section 3, shall determine to what extent and amount the Land shall guarantee, by means of indemnification under Section 34, compensation for damage not covered by financial security. In applying this Act such guarantee shall be equivalent to financial security.

(5) For the purposes of this Act, legal liability to pay compensation shall mean liability to pay compensation for damage under private law. This term shall not include obligations under Articles 640 and 641 of the Insurance Code and shall include obligations under Section 7(6) of this Act taken with Section 14 of the Federal Act on Protection against Nuisances, as well as similar obligations to pay indemnities or compensation only insofar as the damage or prejudice has been caused by an accident.

Section 14 - Third party liability insurance and other forms of financial security

(1) Where, in the case of installations and activities involving liability under the Paris Convention taken with Section 25(1) to (4), under Section 25a or under an international agreement referred to in Section 25a (2), financial security is provided by third party liability insurance, Sections 158c to 158h of the Insurance Contracts Act shall apply as appropriate, provided that the period in Section 158c (2) of the latter Act shall be two months and its expiry shall be delayed, in case of liability for the carriage of nuclear substances, for the duration of the carriage; if Section 158c (4) of the Insurance Contracts Act is applied, indemnification by the Bund under Section 34 shall not be taken into account. Section 156(3) of the Insurance Contracts Act shall not be applicable.

(2) Where financial security is not provided in the form of third party liability insurance, but by indemnification or guarantee of a third party, sub-section 1 shall apply *mutatis mutandis*.

Section 15 - Ranking of claims for payment out of financial security

(1) If the operator of a nuclear installation obliged to provide financial security and a person suffering damage are, at the time of the nuclear incident, combined enterprises of a combine within the meaning of Section 18 of the Companies' Act, the operator's financial security may be used to satisfy legal claims for compensation by that person only on condition that the satisfaction of claims of other victims is not thereby prejudiced. Nuclear installations within the meaning of the foregoing sentence shall include reactors comprised in a means of transport.

(2) If damage was caused to an industrial installation in the vicinity of the nuclear installation, the first sentence of sub-section 1 shall apply *mutatis mutandis* if the site serves to utilise energy originating from the nuclear installation for production processes.

(3) Claims having a lower rank under sub-sections 1 and 2 shall rank equally amongst themselves.

Section 16 - (Repealed)

Section 17 - Restrictions, conditions, revocation, designation as operator of a nuclear installation

(1) Licences and general permits granted under this Act or under a regulation made thereunder shall be issued in writing. They may contain restrictions and may be subject to conditions with a view to achieving the purposes specified in Section 1. Conditions may be imposed subsequently so far as may be necessary to achieve the purposes specified in Section 1(2) and, (3). Licences, other than those issued under Section 7, and general permits may be granted for a fixed period.

(2) Licences and general permits may be withdrawn if one of their conditions has not been complied with at the time of issue.

(3) Licences and general permits may be revoked if

1. they have not been used within a period of two years, unless otherwise provided in the licence or general permit,
2. one of their conditions has subsequently ceased to exist, and no remedial action has been taken within a reasonable time, or
3. the provisions of this Act or regulations made thereunder, orders or directions issued by the supervisory authorities, or the terms and conditions contained in the licence or general permit, have been seriously or repeatedly violated, or a condition imposed subsequently has not been complied with and no remedial action has been taken within a reasonable time.

(4) Licences shall be revoked if the financial security provided does not comply with the determination made under Section 13(1), and the person required to provide financial security fails to furnish proof, within a reasonable period to be fixed by the administrative authority, that he has complied with such determination.

(5) Licences or general permits shall also be revoked whenever such revocation is necessary to avoid substantial risks to employees, third parties or the general public, and conditions imposed subsequently cannot provide a remedy within a reasonable time.

(6) When activities are licensed which authorise the operation of a nuclear installation, the licensee shall be expressly designated as operator of the nuclear installation in the licence.

#### Section 18 - Compensation

(1) If a licence or general permit granted under this Act or a regulation issued thereunder is withdrawn or revoked, appropriate compensation shall be paid to the licensee. If the withdrawal or revocation is effected by a federal authority, the Bund shall be liable for the compensation; if effected by a Land authority, the Land concerned shall be liable. The amount of compensation shall be determined with due regard to the public interest and that of the persons concerned, and shall take into account the reasons which have led to such withdrawal or revocation. The compensation shall be limited to the expense incurred by the person concerned and, in the case of an installation, to its current value. In the event of dispute as to the amount of compensation, the matter may be brought before the ordinary courts.

(2) There shall be no liability to pay compensation if

1. the holder of the licence or general permit has obtained such licence or general permit by making substantially incorrect or incomplete statements,

2. the holder of the licence or general permit, or persons carrying out activities on his behalf thereunder, have by their conduct given cause for revocation of the licence or general permit, in particular by serious and repeated violation of the provisions of this Act, or of regulations made thereunder, or of orders and directions issued by the supervisory authority, or of the terms and conditions of the licence or general permit, or by non-compliance with conditions imposed subsequently,
3. the revocation had to be ordered because employees, third parties or the general public were subsequently exposed to serious hazards arising from the licensed installation or activity.

(3) Sub-sections 1 and 2 shall apply *mutatis mutandis* to conditions imposed subsequently under Section 17(1) third sentence.

(4) If the Land is liable for compensation, the Bund or another Land shall contribute thereto, in proportion to their general interest in the withdrawal or revocation. The same shall apply if the Bund is liable for compensation.

#### Section 19 - Government supervision

(1) Any handling of, or transactions in radioactive substances, the construction, operation and possession of installations of the type specified in Section 7 and Section 11(1) No. 2, any handling of, or transactions in installations, apparatus and equipment of the type specified in Section 11(1) No. 3, as well as the carriage of such substances, installations, apparatus and equipment, shall be subject to government supervision. In particular, the supervisory authorities shall ensure compliance with the provisions of this Act and of regulations made thereunder, with such orders and directions as are issued by the supervisory authorities pursuant thereto, and with the terms and conditions of the licence or general permit, as well as with any conditions subsequently imposed. The provisions of Section 139b of the Trading and Industrial Code shall apply *mutatis mutandis* to the powers and duties of the supervisory authorities.

(2) Agents of the supervisory authority, and any expert called upon by such authority under Section 20, or the agents of other authorities called upon, shall at all times have access to places where there are radioactive substances, installations of the type specified in Section 7 and Section 11(1) No. 2, or installations, apparatus or equipment of the type specified in Section 11(1) No. 3, or to places from which radiation is originating, and to places where there is reason to believe that such conditions exist; and such persons shall have authority to carry out at such places all inspections necessary for the performance of their duties. They may request the persons in charge, or employees of such places, to provide them with any information that they may require in the course of such inspection. Section 24b of the Trading and Industrial Code shall apply as appropriate. The fundamental right to inviolability of a person's place of residence under Article 13 of the Basic Law shall be curtailed so far as may be necessary for the exercise of these powers.

(3) The supervisory authority may order that a situation be discontinued which is contrary to the provisions of this Act or regulations issued thereunder, to the terms and conditions of the licence or general permit, or to any condition subsequently imposed, or which might endanger life, health or property through the effects of ionizing radiation. In particular, the supervisory authority may order that

1. safety measures shall be taken, and may specify such measures,
2. radioactive substances shall be stored, or kept in custody, in a place designated by it,
3. the handling of radioactive substances, the construction or operation of installations of the type specified in Section 7 and Section 11(1) No. 2, or the handling of installations, apparatus or equipment of the type specified in Section 11(1) No. 3 shall be suspended temporarily or, where the requisite licence has not been granted or has been finally revoked, permanently.

(4) Nothing herein contained shall affect the supervisory powers conferred by other legal provisions, or such general powers as result from the legislation of the Länder.

#### Section 20 - Experts

Experts may be consulted by the competent authorities in the licensing and control procedures under this Act and any regulations issued thereunder. Section 24b of the Trading and Industrial Code shall apply mutatis mutandis.

#### Section 21 - Charges

- (1) Charges (fees and expenses) shall be made
  1. for decisions concerning applications under Sections 4, 6, 7, 7a, 9 and 9b,
  2. for determinations under Section 4b(1) second sentence and Section 13(1) second sentence, for decisions under Section 9b(2) second sentence, for decisions under Section 17(1) third sentence, (2), (3), (4) and (5), provided there is no obligation to pay compensation under Section 18(2), and for decisions under Section 19(3),
  3. for government safekeeping of nuclear fuels under Section 5(1),
  4. for other official acts including inspections and investigations by the Federal Institute for Physics and Technology, where it is competent under Section 23,
  5. for other supervisory measures under Section 19 to be specified in greater detail in the regulation referred to in sub-section (3) below.

(2) Expenses of experts shall be reimbursed if limited to amounts which, having regard to the necessary expert knowledge and particular difficulties of the report, inspection and investigation, constitute appropriate consideration for the activity of the expert concerned.

(3) Details shall be determined by regulation in accordance with the principles of the Act on Administrative Costs. Situations entailing payment of fees shall thereby be more closely specified and fees fixed on the basis of fixed scales, outline scales or by reference to the value of the subject matter. Fee scales shall be fixed in such a way as to cover the personal and material expenses associated with official action, inspections or investigations; in the case of favourable official action, the significance, economic value or other advantage to the feepayer may also be taken into account as appropriate. The regulation may exempt from the payment of charges the Federal Institute for Physics and Technology and provide for the payment of fees for official action by specified authorities in derogation from Section 8 of the Act on Administrative Costs. The period of limitation for charges due may be extended notwithstanding Section 20 of the Act on Administrative Costs. It can be specified that the regulation shall also apply to administrative proceedings pending at the time of its entry into force, provided that at such time the charges have not yet been fixed.

(4) Expenditure on protective measures and for medical investigations undertaken under this Act or a regulation made thereunder, shall be borne by the person requiring a licence under this Act or a regulation made thereunder, or who is obliged to give notification of the activity in relation to which the protective measure or medical investigation is required.

(5) In general the cost regulations of the Länder shall apply to the enforcement of this Act, and of regulations made under Section 7(4) third sentence and (5), Section 7a (2) and Sections 10 to 12, by the Länder authorities subject to the provisions of sub-section (2) above.

Section 21a - Charges (fees and expenses) or payment for the use of installations under Section 9a (3)

(1) Charges (fees and expenses) shall be payable by the person under a delivery obligation for the use of installations under Section 9a (3). Remuneration under Section 21(2) and expenditure under Section 21(4) may also be charged as expenses. General legal principles relating to fees shall apply to the fee basis, the person entitled to the fee, the person responsible for payment of the fee, the charging of the fee, advance payment, provision of security, date due, penalty for late payment, postponement of payment, waiver, remission, limitation, repayment and legal remedies in accordance with Sections 11, 12, 13(2), 14 and 16 to 22 of the Act on Administrative Costs, subject to contrary provision in the regulation under sub-section 2.

(2) Situations giving rise to charges under sub-section (1) may be more closely defined by regulation and fixed scales of fees or outline scales established. Fee scales shall be fixed in such a way as to cover those costs that can be calculated in accordance with principles of business management of day-to-day administration and maintenance of installations under Section 9a (3). This shall include interest payments on invested capital and its depreciation. Depreciation shall be based on the probable length of life

and type of use. Capital deriving from contributions under Section 21b and from services and contributions of third parties shall not be taken into account so far as interest payments are concerned. In addition account shall be taken of the extent and type of use in each case in fixing fee scales. To cover investment expenditure in Land collection points a flat rate fee may be charged. In fixing charges or payments made at the time of delivery to a Land collection point, outlays incurred in connection with subsequent removal to Federal installations and advance payments under Section 21b (2) may also be included. They shall be paid to the Bund.

(3) Land collection points may require payment in accordance with a use regulation instead of a charge. In fixing such payment regard shall be had to the fee fixing principles in sub-section (2).

#### Section 21(b) - Contributions

(1) To cover the necessary expenditure on planning, acquisition of land and other rights, research and development connected with the installation, construction, extension and renovation of installations of the Bund under Section 9a (3), contributions may be required from persons under an obligation to deliver to an installation of the Bund under a regulation made under Section 12(1) No. 8. Necessary expenditure shall include property and rights made available by the commissioning authority for the installation as at the date on which they were made available.

(2) A person who has applied for a licence under Sections 6, 7 or 9 or under the provisions of a regulation made under this Act to handle radioactive substances and produce ionizing radiation or who has been granted such a licence, may be required to pay some of the contribution in advance in cases where on the basis of the activity requiring a licence or the operation of the installation an obligation to deliver to installations of the Bund under Section 9a (3) is likely to arise.

(3) More detailed provisions concerning the levying, waiving, postponement, remission and repayment of contributions and advance payments thereof, may be laid down by regulation. The person entitled, the person liable and the time at which the contribution becomes due may thereby, be specified. Contributions shall be fixed on the basis of necessary expenditure actually incurred having regard to services and payments of third parties. Contributions shall be proportionate to the advantages accruing to the person liable from the installation. Advance payments of contributions shall be repaid with appropriate interest where they exceed the contributions paid after the actual expenditure.

## CHAPTER III

### ADMINISTRATIVE AUTHORITIES

#### Section 22 - Competence for import and export licences, import and export control

(1) The Federal Office for Trade and Industry shall decide on applications for licences under Section 3 and on the revocation or withdrawal of licences already issued. The same shall apply where regulations made under Section 11 provide for import and export licences.

(2) The Federal Minister of Finance, or the customs authorities designated by him, and in the Free Port of Hamburg the Free Port Authority of the Free and Hanseatic City of Hamburg, shall be responsible for import and export control.

(3) Insofar as the Federal Office for Trade and Industry makes any decisions under sub-section (1), it shall be bound by the technical instructions issued by the Federal Minister responsible for nuclear safety and radiation protection, notwithstanding its subordination to the Federal Minister of Economics and his powers to issue instructions under other legal provisions.

#### Section 23 - Competence of the Federal Institute for Physics and Technology

(1) The Federal Institute for Physics and Technology shall be competent for

1. government safekeeping of nuclear fuel,
2. the construction and operation of installations of the Bund for the safeguarding and final storage of radioactive waste,
3. the licensing of the carriage of nuclear fuel and large sources,
4. the licensing of the storage of nuclear fuel outside government custody, provided this is not a preparation for, or part of an activity requiring a licence under Sections 7 or 9, and
5. the withdrawal or revocation of licences under Nos. 3 and 4.

In carrying out these functions the Institute shall act in accordance with the technical instructions of the Federal Minister responsible for nuclear safety and radiation protection, who in matters under No. 2 above, where questions arise concerning research and technology in regard to the safekeeping and final storage of radioactive waste, shall act in agreement with the Federal Minister responsible for nuclear technology.

(2) Large sources within the meaning of sub-section (1) No. 3 are radioactive substances whose activity level per consignment exceeds the value fixed in marginal note 2450(5) in Annex A to the European Agreement of 30th September 1957 on the International Carriage of Dangerous Goods by Road (ADR) (BGBl 1979 II page 1491).



## Section 24 - Competence of the Länder authorities

(1) All other administrative functions under Chapter II and any regulations made thereunder shall be performed by the Länder on behalf of the Bund. Control of any carriage of radioactive substances by rail or by ship undertaken by the German Federal Railways shall, however, be exercised by such bodies of the German Federal Railways as have been designated by the Federal Minister of Transport.

(2) The highest authorities of the Länder designated by their governments shall be competent to grant, withdraw and revoke licences under Sections 7, 7a and 9, and to make planning decisions under Section 9b or to revoke such decisions. These authorities shall exercise control over installations covered by Section 7, and over the use of nuclear fuel outside such installations. In particular cases, they may delegate their functions to subordinate authorities. Any complaints against their orders shall be heard by the highest Länder authorities. Insofar as provisions other than those laid down in this Act confer supervisory powers on any other authorities, their competence shall not be affected.

(3) In matters within the competence of the Federal Armed Forces, the Federal Minister of Defence, or the agencies designated by him, shall discharge the function referred to in sub-sections (1) and (2), in agreement with the Federal Minister responsible for nuclear safety and radiation protection.

## CHAPTER IV

### LIABILITY

## Section 25 - Liability for installations

(1) If damage is caused by a nuclear incident originating from a nuclear installation, the liability of the operator of the nuclear installation shall be governed by the provisions of this Act in addition to the provisions of the Paris Convention. The Paris Convention shall be applicable within the Federal Republic of Germany irrespective of whether or not it is binding at international law, to the extent that its rules are not conditional on reciprocity brought about by the coming into force of the Convention.

(2) Where in the case of the carriage of nuclear substances, including storage incidental thereto, the carrier has assumed liability by contract in place of the operator of a nuclear installation situated within the area of application of this Act, such carrier shall be deemed the operator of a nuclear installation from the moment at which he assumes liability. The contract shall be in writing. Such assumption of liability shall be valid only if it has been authorised, upon application by the carrier, by the authority competent under Section 4, prior to the commencement of the carriage of nuclear substances or any storage incidental thereto. Such authorisation may be granted only if the carrier has been licensed as such, or has his main place of business within the area of application of this Act and the operator of the nuclear installation has declared his consent to the authority.

(3) The provisions of Article 9 of the Paris Convention concerning the exemption from liability for damage caused by nuclear incidents directly due to armed conflict, hostilities, civil war, insurrection, or a grave natural disaster of an exceptional character, shall not be applicable. If the damage is suffered in another state, the first sentence shall apply only to the extent that the other state, at the time of the nuclear incident, has compensation arrangements in relation to the Federal Republic of Germany which are equivalent in nature, extent and amount.

(4) The operator of a nuclear installation shall be liable without the territorial restrictions provided for in Article 2 of the Paris Convention.

(5) The operator of a nuclear installation shall not be liable under the Paris Convention if the damage has been caused by a nuclear incident involving nuclear substances specified in Annex 2 to this Act.

#### Section 25a - Liability for nuclear ships

(1) The provisions of this Chapter shall apply to the liability of an operator of a nuclear ship with the following modifications:

1. The provisions of the Paris Convention shall be replaced by the corresponding provisions of the Brussels Convention on the Liability of Operators of Nuclear Ships (BGBI 1975 II page 977). The latter shall be applicable within the Federal Republic of Germany irrespective of whether or not it is binding at international law, to the extent that its rules are not conditional on reciprocity brought about by the coming into force of the Convention.
2. If the damage is suffered in another state, Section 31(1) shall be applicable as regards the amounts exceeding the maximum amounts of liability under the Brussels Convention on the Liability of Operators of Nuclear Ships, only to the extent that the legislation of that State provides, at the time of the nuclear incident, for a third party liability regime for operators of nuclear ships which is applicable in relation to the Federal Republic of Germany and is equivalent in nature, extent and amount. Sections 31(2), 36, 38(1) and 40 shall not apply.
3. Section 34 shall apply only to nuclear ships authorised to sail under the flag of the Federal Republic of Germany. If, within the area of application of this Act, a nuclear ship is built or equipped with a reactor for another state, or persons of another state, Section 34 shall apply until the nuclear ship is registered in the other state or acquires the right to sail under the flag of another state. Seventy-five per cent of the indemnification under Section 34 shall be borne by the Bund and the remainder by the Land competent for the licensing of the nuclear ship under Section 7.
4. In the case of nuclear ships which are not entitled to sail under the flag of the Federal Republic, this Chapter shall apply only if the nuclear damage caused by the nuclear ship has been suffered within the area of application of this Act.

5. The courts of the state under whose flag the nuclear ship is entitled to sail shall have jurisdiction over actions for compensation; in the case referred to in No. 4, the court of the place within the area of application of this Act where the nuclear damage was suffered shall equally have jurisdiction.

(2) To the extent that international agreements on liability for nuclear ships contain mandatory provisions at variance with this Act, such provisions shall override the provisions of this Act.

#### Section 26 - Liability in other cases

(1) Where, in cases other than those specified by the Paris Convention, taken with Section 25(1) to (4), loss of life, personal injury, or deterioration of health is caused to any person or damage is caused to property by the effects of any nuclear fission process or radiation from radioactive substances or the effects of an accelerator, the holder of the substances affected by the nuclear fission, of the radioactive substances or of the accelerator shall be liable to pay compensation for damage in accordance with Sections 27 to 30, 31(3), 32(1), (4) and (5) and Section 33. There shall be no liability to pay compensation if the damage was caused by an event which the holder and such persons as are acting for them in connection with such possession could not avoid, even by taking every reasonable precaution, and which is due neither to a defective condition of the safety devices nor to any failure in their performance.

(2) Sub-section (1) shall apply mutatis mutandis where damage of the kind specified in sub-section (1) was caused by the effects of nuclear fission.

(3) Any person who has lost possession of the substances, without having transferred them to a person entitled to such possession in accordance with this Act or any regulation made thereunder, shall be liable as if he were the holder.

(4) The provisions of sub-sections (1) to (3) shall not apply

1. where the radioactive substances or the accelerators have been applied to the injured person by a physician or dentist, or under the supervision of a physician or dentist, in the course of medical treatment, and the substances, and accelerators used and the necessary measuring apparatus have complied with the current state of science and technology and the damage is not due to the fact that such substances, accelerators or measuring apparatus have not been properly maintained,

2. where a legal relationship exists between the holder and the injured person under which the latter has accepted the risk associated with the substances.

(5) The second sentence of sub-section (1) and sub-section (4) No. 2 shall not apply to the use of radioactive substances on human beings in the course of medical research. Where the holder of the radioactive substances disputes the causal link between the use of the radioactive substances and damage or

injury which has occurred, he shall prove that, in the current state of medical science, there is no reasonable probability of such link existing.

(6) A person who carries substances on behalf of a third party shall not be liable to pay compensation under sub-sections (1) to (3). So long as the consignee has not taken charge of the substances, the consignor shall remain liable under the aforementioned provisions, regardless of whether or not he is the holder of such substances.

(7) Within the scope of application of the first sentence of sub-section (1), no legal provisions shall be affected pursuant to which the holder referred to in sub-section (1) and any person deemed the holder under sub-section (3), are liable to a greater extent than under the provisions of this Act or pursuant to which another person is liable for the damage.

#### Section 27 - Contributory fault of the injured person

Where a fault of the injured person has contributed to the injury sustained, Article 254 of the Civil Code shall apply; in the event of damage to property, the fault of the person in actual control thereof, shall be deemed to be that of the injured person.

#### Section 28 - Extent of compensation in case of death

(1) In the event of death, compensation shall be provided for the costs of any attempted cure as well as for the pecuniary loss sustained by the deceased during his illness by reason of loss or reduction of his earning capacity, increase of his needs or handicap in regard to his career. In addition, the person liable shall refund funeral costs to the person required to bear such costs.

(2) If, at the time of the injury, the deceased was, or might have been, under a legal obligation to provide maintenance for a third person who loses such maintenance as a result of the decease, the person liable shall pay compensation to such third person, to the extent of the maintenance for which the deceased would have been liable during his expected life. Such liability shall also exist where, at the time of the injury, the third person was conceived but not yet born.

#### Section 29 - Extent of compensation in case of personal injury

(1) In the event of personal injury or damage to health, compensation shall comprise the costs of medical treatment and the pecuniary loss sustained by the injured person by reason of temporary or permanent loss or reduction of his earning capacity, increase of his needs or handicap in regard to his career as a result of the injury.

(2) In case of personal injury or damage to health, the injured person may claim adequate compensation also for pain and suffering, if the damage has been caused wilfully or by negligence. Such claims shall not be transferable or inheritable except if acknowledged by contract or subject to a pending action.

### Section 30 - Annuity

(1) Compensation for any loss or reduction of earning capacity, any special needs or any handicap in regard to the career of the injured person, and any compensation due to a third person under Section 28 (2) shall be provided by means of an annuity.

(2) The provisions of Article 843 (2) to (4) of the Civil Code shall apply as appropriate.

(3) Where the court awarding an annuity has not required security from the defendant, the plaintiff shall nevertheless, be entitled to demand security, if the financial situation of the person liable has also significantly deteriorated; likewise, the plaintiff shall also be entitled to demand an increase in the amount of any security specified in the judgment.

### Section 31 - Liability ceiling

(1) The liability of an operator of a nuclear installation under the Paris Convention taken with Section 25 (1), (2) and (4) shall be unlimited. In cases under Section 25 (3) the liability of an operator shall be limited to the maximum amount of the State guarantee.

(2) Where damage occurs in another State the liability of an operator of a nuclear installation shall be limited to

1. 300 million Special Drawing Rights (SDR) in regard to Contracting States of the Paris Convention, for which the Brussels Supplementary Convention as contained in the Protocol of 16th November 1982 has come into force,
2. 120 million SDR in regard to Contracting States of the Paris Convention, for which the Brussels Supplementary Convention as contained in the Supplementary Protocol of 28th January 1964 has come into force,
3. 15 million SDR in regard to other states.

The limitation of liability in the first sentence shall not apply where the state in which damage has occurred has, at the time of the nuclear incident, compensation arrangements in relation to the Federal Republic under sub-section (1) of equivalent nature, extent and amount.

(3) The person liable under the Paris Convention taken with Section 25 (1) to (4) or under Section 26, shall be liable in case of damage to property only up to the ordinary value of the damaged property, plus the cost of protection against radiation hazards originating therefrom. In case of liability under the Paris Convention taken with Section 25 (1) to (4) compensation for damage to the means of transport upon which the nuclear substances involved were at the time of the nuclear incident shall be paid only if such satisfaction of other claims in cases under sub-section (1) has been secured from the maximum amount of the state guarantee, and in cases under sub-section (2) from the maximum amount of liability.

### Section 32 - Limitation

(1) Claims for compensation under this Chapter shall expire three years from the date on which the person entitled to compensation became aware or from the date on which he ought reasonably to have known of both the damage and the person liable, and in any case thirty years from the date of the event which caused the damage.

(2) In cases specified under Article 8(b) of the Paris Convention, the thirty-year limitation period under sub-section (1) shall be replaced by a period of twenty years from the date of the theft, loss, jettison or abandonment.

(3) Claims against the operator of a nuclear installation for death and personal injury under the Paris Convention brought before the court within ten years of the nuclear incident shall have priority over claims made after the expiry of that period.

(4) Where negotiations concerning compensation are under way between the person liable to pay and the person entitled to compensation, the limitation period shall cease to run until such time as one or other of the parties withdraws from such negotiations.

(5) In all other respects, the provisions of the Civil Code relating to limitation periods shall apply.

### Section 33 - Several persons liable

(1) If several persons are legally liable to pay compensation for damage caused by a nuclear incident or otherwise by the effects of nuclear fission, or radiation emitted by radioactive substances, or the effects of ionising radiation emitted by an accelerator, they shall be jointly and severally liable, save as otherwise provided in Article 5(d) of the Paris Convention.

(2) In cases under sub-section (1) the amount of compensation due from each of the persons liable shall be apportioned between them according to the circumstances and the extent to which the damage was caused by one or the other, save as otherwise provided in Article 5(d) of the Paris Convention. However, the operator of a nuclear installation shall not be required to pay compensation exceeding the maximum amounts established pursuant to Section 31 (1) and (2).

### Section 34 - Indemnification

(1) Where the operator of a nuclear installation situated within the area of application of this Act is legally liable to pay compensation for damage caused by a nuclear incident under the provisions of the Paris Convention taken with Section 25 (1) to (4), or under a foreign law applicable to the incident, the operator shall be indemnified against liability to pay compensation to the extent that such liability is not covered or cannot be met out of his financial security. The maximum amount of indemnification shall be twice the maximum financial security. The obligation to indemnify the operator

shall be restricted to this maximum amount less the amount which is covered and can be met by the financial security.

(2) If, after a nuclear incident has occurred, it is to be expected that indemnification will be necessary, the operator of the nuclear installation shall be required

1. to give notification thereof without delay to the Federal Minister designated by the Federal Government and to the authorities of the Länder designated by their governments,
2. to inform without delay the competent Federal Minister and the competent authorities of the Länder of any claims for compensation raised or of any inquiry instituted against him, as well as to provide on request all information necessary to examine the circumstances of the case and their appreciation at law,
3. to comply, in the event of negotiations for the settlement of claims for compensation in or outside court, with the instructions of the competent authorities of the Länder,
4. to refrain from admitting or satisfying any claim for compensation without the consent of the competent authorities of the Länder except if such admission or satisfaction cannot reasonably be refused.

(3) In all other respects Sections 62 and 67 and the provisions of Title 6 of Chapter II of the Insurance Contracts Act, except for Section 152, shall apply mutatis mutandis to the obligation to indemnify.

#### Section 35 - Apportionment

(1) Where legal liability to pay compensation for damage caused by an incident is expected to exceed the funds available, their apportionment and the procedure to be observed shall be governed by an Act or, pending its enactment, by regulation.

(2) The regulation referred to in sub-section (1) may only make such provision regarding apportionment of the funds available as compensation for damage as are required to avert hardship. Such regulation shall ensure that satisfaction of the claims of all insured persons will not be unduly prejudiced by the satisfaction of individual claims.

#### Section 36 - Distribution of the indemnification between the Bund and the Länder

The Bund shall bear seventy-five per cent of indemnification under Section 34. The remainder shall be borne by the Land where the nuclear installation at the origin of the nuclear incident is situated.

Section 37 - Recourse in the case of indemnification

If the operator of a nuclear installation has been indemnified under Section 34, recourse may be had against him to the extent that compensation has been paid, if

1. the operator has violated his obligations under Section 34(2) or (3); however, recourse shall be excluded to the extent that such violations have not influenced the evaluation of the damage nor the extent of the compensation paid,
2. the operator or, in the case of a corporate body, its legal representative has, in the performance of his functions, caused the damage wilfully or by gross negligence,
3. compensation has been paid because the extent and amount of the financial security available have not corresponded to the determination by the competent authority.

Section 38 - Compensation from the Bund

(1) If a person having suffered nuclear damage within the area of application of this Act cannot obtain compensation under the law of another Contracting State to the Paris Convention applicable to the incident because

1. the nuclear incident occurred in the territory of a non-Contracting State to the Paris Convention,
2. the damage was caused by a nuclear incident directly due to armed conflict, hostilities, civil war, insurrection or a grave natural disaster of an exceptional character,
3. the applicable law excludes liability for damage to the means of transport upon which the nuclear substances involved were at the time of the nuclear incident,
4. the applicable law does not provide for the operator's liability for damage caused by ionizing radiation emitted by another source of radiation inside the nuclear installation,
5. the applicable law provides for a shorter period of limitation or shorter time limit than this Act, or
6. the total funds available for compensation fall short of the ~~maximum~~ amount of state indemnification,

the Bund shall pay compensation up to the ~~maximum~~ amount of state indemnification.

(2) The Bund shall also pay compensation up to the ~~maximum~~ amount of state indemnification if the foreign law or provisions of an international agreement applicable to damage suffered within the area of application of this Act provide for compensation for the injured person which in nature, extent and



amount falls considerably short of the compensation which the injured person would have obtained had this Act applied.

(3) Sub-sections (1) and (2) shall not apply to injured persons who are not German within the meaning of Article 116(1) of the Basic Law and who do not have their habitual residence within the area of application of this Act, unless their country of origin has, at the time of the nuclear incident, compensation arrangements in relation to the Federal Republic of Germany of equivalent nature, extent and amount.

(4) Claims under sub-sections (1) and (2) shall be brought before the Federal Agency for Administration. They shall lapse three years from the date on which the decision on compensation rendered under foreign or international law becomes final.

Section 39 - Exemptions of the Bund and the Länder from the obligation to indemnify

(1) In the case of indemnification under Section 34, and compensation under Section 38, claims for compensation shall not be taken into account which have subsidiary rank under Section 15(1) and (2).

(2) Compensation paid under Section 29(2) shall qualify for indemnification under Section 34 and compensation under Section 38 only if the payment of such compensation is necessary to avoid serious inequity because of the particular gravity of the injury.

Section 40 - Actions against the operator of a nuclear installation situated in another Contracting State

(1) If under the provisions of the Paris Convention, a court within the area of operation of this Act has jurisdiction over actions for compensation against the operator of a nuclear installation situated in another Contracting State to the Paris Convention, the liability of the operator shall be governed by the provisions of this Act.

(2) Contrary to sub-section (1), the following shall be determined by the law of the Contracting State in which the nuclear installation is situated:

1. who is to be considered as operator,
2. whether the operator's liability extends to nuclear damage suffered in a non-Contracting State to the Paris Convention,
3. whether the operator's liability extends to nuclear damage caused by ionizing radiation emitted by another source of radiation inside a nuclear installation,
4. whether and to what extent the operator's liability extends to damage to the means of transport upon which the nuclear substances involved were at the time of the nuclear incident,
5. the ceiling on the operator's liability,

6. after what period claims against the operator will be statute-barred or extinguished,
7. to what extent nuclear damage will qualify for compensation in the cases set out in Article 9 of the Paris Convention.

## C H A P T E R   V

### P E N A L T I E S   A N D   F I N E S

#### Sections 41 to 45 - (Repealed)

#### Section 46 - Offences

- (1) A person shall be guilty of an offence who wilfully or negligently:
  1. carries nuclear substances without having provided the financial security required under Section 4b (1) first or second sentences,
  2. constructs installations for the production, treatment or processing, or for the fission of nuclear fuel or reprocessing of irradiated nuclear fuel without having obtained the necessary licence under Section 7(1) or (5);
  3. contravenes a determination under Section 13(1), an enforceable condition imposed under Section 17(1) second or third sentence or an enforceable order under Section 19(3);
  4. contravenes a regulation made under Section 11(1) or Section 12(1) first sentence Nos. 1 to 7 and 9 to 12 or an enforceable order under a regulation under Section 12(1) first sentence No. 13, provided that the regulation specifies such penalties or fines in relation to a specified act;
  5. does not carry the licence contrary to the first sentence of Section 4(5) or does not carry the certificate referred to in the second sentence of Section 4(5) or does not produce on request such licence or certificate contrary to the third sentence of Section 4(5).
- (2) The offence shall be punishable by a fine of up to DM 100 000 in cases under sub-section (1) Nos. 1 to 4 and up to DM. 1 000, in cases under sub-section (1) No. 5.
- (3) The administrative authority for the purposes of Section 36(1) No. 1 of the Act on Statutory Offences shall be the Federal Office for Trade and Industry as concerns failure to obtain a licence or to notify in the case of import or export of other radioactive substances pursuant to Section 11(1) No. 1, or to comply with a condition imposed in connection therewith pursuant to the second or third sentences of Section 17(1).

Sections 47 and 48 - (Repealed)

Section 49 - Confiscation

Where an offence punishable under Section 46(1) Nos. 1 to 4 has been committed,

1. any object related to the offence, or
2. any object used or intended for the preparation or commission of the offence,

may be confiscated.

Sections 50 to 52 - (Repealed)

C H A P T E R   V I

FINAL PROVISIONS

Section 53 - Registration of damage due to unknown causes

Damage which, in the light of existing scientific knowledge, has been caused by the effects of radiation from radioactive substances but cannot be attributed to any particular person, shall be registered with and investigated by the Federal Minister responsible for nuclear safety and radiation protection.

Section 54 - Making of regulations

(1) Regulations under Sections 11, 12, 13, 21(3), 21a (2) and 21b (3) shall be made by the Federal Government. The same shall apply to regulations under Section 10, insofar as exemptions are granted from the requirement for a licence under Section 7. All other regulations under this Act shall be made by the Federal Minister responsible for nuclear safety and radiation protection.

(2) Regulations shall require approval by the Federal Council. This shall not apply to regulations confined to altering physical, technical and radiation biology values fixed in regulations under Sections 11 and 12.

(3) The Federal Government may by regulation wholly or partly delegate its powers under Sections 11 and 12 to the Federal Minister responsible for nuclear safety and radiation protection.

Section 55 - (Repeal of legal provisions)

Section 56 - Licences issued under Land legislation

(1) Licences, exemptions or approvals granted under Land legislation for the construction and operation of installations within the meaning of Section 7 shall remain effective. They shall be deemed equivalent to licences granted under Section 7 and conditions attached to them shall be equivalent to conditions imposed under Section 17(1). Insofar as a licence issued under Land legislation includes stipulations concerning the provision of financial security by the operator of the installation to cover legal liability to pay compensation for damage, such stipulations shall, subject to the provisions of sub-section (2), be deemed a determination for the purposes of Section 13(1).

(2) Within three months of entry into force of this Act the administrative authority [Section 24(2)] shall determine the amount which the operator of the installation must provide as financial security. The latter half of the second sentence of Section 13(1) shall apply mutatis mutandis. Where a guarantee is stipulated under Section 13(4), such guarantee shall apply retrospectively as from the date of entry into force of this Act.

Section 57 - Exclusion of certain legal provisions

Sections 1 to 4 of the Act on the Criminal and Hazardous Use of Explosives of 9th June 1884 (RGBI page 61) as amended by the Regulation of 8th August 1941 (RGBI page 531), and legal provisions made under this Act as well as legal provisions of the Länder concerning explosives, shall not apply to the handling of nuclear fuel.

Section 58 - Application in Berlin

In accordance with Section 13(1) of the Third Transitional Act this Act shall also apply to the Land of Berlin. Regulations made under this Act shall also apply to the Land of Berlin in accordance with Section 14 of the Third Transitional Act.

Section 59 - (Entry into force)

A N N E X 1

Definitions under Section 2(3)

(1) The following terms shall be defined as follows:

1. "Nuclear incident": Means any occurrence or succession of occurrences having the same origin which causes damage, provided that such occurrence or succession of occurrences, or any of the damage caused, arises out of or results either from the radioactive properties, or a combination of radioactive properties with toxic, explosive or other hazardous properties of nuclear fuel or radioactive products or waste or with any of them, or from ionizing radiation originating from another radiation source within the nuclear installation;

2. "Nuclear installation": Means reactors other than those comprised in a means of transport; factories for the manufacture or processing of nuclear substances; factories for the separation of isotopes of nuclear fuel; factories for the reprocessing of irradiated nuclear fuel; facilities for the storage of nuclear substances other than storage incidental to the carriage of such substances; a nuclear installation may also consist of two or more nuclear installations of one operator, located on the same site, together with any other premises on that site, within which radioactive substances are held;

3. "Nuclear fuel": Means fissionable material in the form of uranium metal, alloy or chemical compound (including natural uranium), plutonium metal, alloy or chemical compound;

4. "Radioactive products or waste": Means any radioactive material produced in or made radioactive by exposure to the radiation incidental to the process of producing or utilising nuclear fuel, but does not include

(a) nuclear fuel,

(b) radioisotopes, outside a nuclear installation, which have reached the final stage of fabrication, so as to be usable for any industrial, commercial, agricultural, medical, scientific or educational purpose;

5. "Nuclear substances": Means nuclear fuel (other than natural or depleted uranium) and radioactive products or waste;

6. "Operator of a nuclear installation": Means the person designated or recognised by the competent public authority as the operator of that installation.

(2) Special Drawing Rights within the meaning of this Act shall be Special Drawing Rights of the International Monetary Fund (BGB1 1978 II page 13) as used by it for its own operations and transactions.

A N N E X 2

Exemption from liability and security requirements

Sections 4(3), 4b(2) and 25(5) shall apply to nuclear fuel or nuclear substances whose activity or quantity

1. per individual item carried or dispatched or
2. in an individual undertaking or independent branch of an undertaking, in the case of a non-commercial undertaking at the place where the activity of the applicant is carried on

does not exceed  $10^5$ , the exclusion limit, and which in the case of enriched uranium does not contain more than 350 grammes of uranium 235. The exclusion limit is the activity level or quantity up to which no licence or notification for handling is required under this Act or regulation made thereunder.

# *Yugoslavia*

## ACT OF 21ST NOVEMBER 1984 ON RADIATION PROTECTION AND THE SAFE USE OF NUCLEAR ENERGY\*

### I. INTRODUCTORY PROVISIONS

#### Section 1

With a view to protecting the lives and health of the population as well as the environment from the harmful effects of ionizing radiations, which is of interest for the whole country and the international community, and in order to create preconditions required for the safety of nuclear facilities, measures shall be taken as prescribed by this Act and other regulations passed on its basis.

#### Section 2

The protection of the environment from the harmful effects of ionizing radiations, for the purposes of this Act, means protection of air, water, soil, human and animal feed, medicines and articles in common use as well as the protection of the environment wherein sources of ionizing radiations are operated or encountered or wherein such sources are being used.

#### Section 3

Sources of ionizing radiations, for the purposes of this Act, mean:

- 1) radioactive materials appearing in the environment due to a nuclear explosion or other reasons of an external nature;
- 2) nuclear reactors or other installations within nuclear facilities which contain radioactive materials;

---

\* Unofficial translation by Yugoslav authorities. The Act was published in the Federal Official Gazette No. 62/84 and entered into force on 1st December 1984.

- 3) irradiated nuclear fuel;
- 4) X-ray machines, accelerators and other devices and machines producing or capable of producing ionizing radiations;
- 5) radioactive materials and installations containing radioactive materials;
- 6) uranium and thorium mines, other mines wherein ionizing radiations exceed the prescribed limits, uranium ore and thorium ore processing plants as well as plants for the production of nuclear raw materials from other ores and raw materials containing radioactive materials;
- 7) radioactive waste.

#### Section 4

Nuclear facilities, for the purposes of this Act mean nuclear power plants, nuclear heating plants, nuclear research reactors, uranium enrichment facilities, fuel element fabrication plants, facilities for reprocessing and disposal of irradiated nuclear fuel as well as facilities including installations and equipment used for storage, processing and disposal of radioactive waste.

#### Section 5

Safety of the nuclear facility, for the purposes of this Act, means all technical and organisational measures anticipated by the project design, implemented in the course of construction, tested during commissioning and applied in operation as well as upon decommissioning which, in all circumstances, provide for environmental protection from contamination by radioactive materials and prevent irradiation of the population and persons employed in such facilities in excess of the prescribed limits.

#### Section 6

Unusual events, for the purposes of this Act, mean circumstances in the environment such as result in or may cause irradiation or radioactive contamination of the working environment, population, parts of population or property in excess of the limits prescribed on the basis of this Act.

Nuclear accident, for the purposes of this Act means an event or a series of events occurring in the course of operation of a nuclear facility and resulting in any of the consequences referred to in paragraph 1 of this Section.



## II. GENERAL MEASURES FOR PROTECTION AGAINST IONIZING RADIATIONS

### Section 7

In order to provide protection from ionizing radiations the following measures shall be taken:

- 1) detection of the presence, type and level of ionizing radiation as well as of the type and extent of contamination of the environment;
- 2) definition of the requirements for siting, construction and use of nuclear facilities;
- 3) definition of the conditions for trading, transportation and use of sources of ionizing radiations;
- 4) provision of equipment and devices used for protection against ionizing radiations and control of the efficiency of such protection;
- 5) limitation of the production, trade or use of products or raw materials contaminated by radioactive materials;
- 6) keeping records accounting for sources of ionizing radiations and for exposure of the population to such radiations;
- 7) health examination of the personnel operating the sources of ionizing radiations and monitoring their exposure to such radiations;
- 8) education and advanced training of the personnel in the field of protection against ionizing radiations and operational safety of nuclear facilities;
- 9) individual and collective protection of people from ionizing radiations;
- 10) mobilisation and employment of civil defence forces and resources;
- 11) sheltering the population, evacuation of the population and property from affected areas, use of radiation protection devices, decontamination of people and farm animals, water, human and animal feed and other products and articles contaminated by radioactive materials;
- 12) storage, treatment and final disposal of radioactive waste;
- 13) physical protection of nuclear facilities and nuclear materials;
- 14) other measures for protection from ionizing radiations as anticipated by the federal regulations or ratified international agreements.

## Section 8

In order to make possible prompt detection and identification of risks of ionizing radiations, radioactive contamination of air, soil, rivers, lakes and the sea as well as of precipitation and fallouts, drinking water and human foods and animal feed shall be regularly tested.

Tests referred to in paragraph 1 of this Section shall be carried out on spots, by methods, and within such time-limits as determined by the regulation of the competent federal body.

Tests referred to in paragraph 1 of this Section may be carried out by Organisations of Associated Labour which:

- 1) employ workers with adequate professional qualifications and operating experience required for performance of the relevant tests;
- 2) have, at their disposal, facilities and equipment for the performance of specific tests.

The federal administrative body competent for public health shall issue a ruling stating which Organisations of Associated Labour comply with the requirements for the performance of tests referred to in paragraph 1 of this Section. The ruling shall be published in the Official Gazette of the SFR of Yugoslavia.

## Section 9

The Organisation of Associated Labour which uses a nuclear facility (referred to hereinafter as the user of the nuclear facility) shall conduct regular tests for contamination by radioactive materials of the environment in its surroundings.

The tests referred to in paragraph 1 of this Section shall be performed in the manner, within the scope and within the time-limits established by the regulation of the competent federal administrative body.

The user of the nuclear facility shall, on the basis of the regulation referred to in paragraph 1 of this Section and of the safety report, identify the programme of tests pursuant to paragraph 1 of this Section which shall be verified by the competent body in the republic or autonomous province, respectively.

## Section 10

A nuclear facility may be constructed and used only on the site and according to such technical and other conditions which provide for protection of the lives and health of the population as well as environmental protection from ionizing radiations exceeding the prescribed limits.

Prescribed irradiation limits as applied in paragraph 1 of this Section designate the limits established in such a way that the share of irradiation produced by the nuclear facility together with irradiation originating from

other sources of ionizing radiations to which the population of the same area is exposed, does not exceed the limits prescribed pursuant to this Act.

#### Section 11

The collection, accounting, treatment, storage and final disposal as well as release of radioactive waste into the environment can only be made in the manner and under the conditions established by regulations passed pursuant to this Act.

#### Section 12

If the user of the nuclear facility has the intention of decommissioning the facility, he shall submit prior notification to that effect to the competent body of the Republic or autonomous province, respectively.

#### Section 13

The user of the nuclear facility who has decommissioned the facility shall within the time-limits determined by the competent body of the Republic, or the province respectively undertake adequate remedial measures at the site, the facility itself and its surroundings in the manner which, pursuant to this Act, provides for environmental protection from ionizing radiations.

#### Section 14

Organisations of Associated Labour, other self-management organisations and communities, bodies of socio-political communities and working people who with their personal labour independently perform a professional activity may procure, trade and use radioactive materials exceeding the prescribed limits of activity and use of X-ray machines and other apparatus generating ionizing radiations only if they have previously obtained the approval of the body designated by republic or provincial regulations.

#### Section 15

The approval referred to in Section 14 of this Act may be issued:

- 1) if the facilities and premises wherein the sources of ionizing radiations are being produced, stored or operated comply with technical, safety, health and other requirements providing for environmental protection from ionizing radiations or protection from contamination by radioactive materials;
- 2) if the persons operating sources of ionizing radiations are provided with adequate devices required for protection from ionizing radiations as well as with equipment needed for radiation measurements;

- 3) if the persons who are to operate sources of ionizing radiations have adequate professional qualifications and satisfy the health requirements prescribed for the operations they will perform;
- 4) if the plan for the prevention of accidents and removal of consequences of such accidents has been elaborated;
- 5) if measures have been taken to prevent radioactive waste from causing contamination of the environment in excess of the prescribed limits.

#### Section 16

Sources of ionizing radiations may not be operated by:

- 1) persons less than eighteen years old;
- 2) women during pregnancy or, in the case of open sources of ionizing radiations, women while nursing.

#### Section 17

Sources of ionizing radiations may be operated by persons who have adequate professional qualifications and satisfy the health requirements prescribed by this Act.

Persons referred to in paragraph 1 of this Section are placed under medical surveillance and are submitted to medical examination before they start operating sources of ionizing radiations, during such employment and, if necessary, upon termination of their work with sources of ionizing radiations.

#### Section 18

Persons operating sources of ionizing radiations and other people may not be exposed to radiation in excess of the limits established by the regulations passed on the basis of this Act.

The level of exposure to ionizing radiations of persons operating sources of ionizing radiations and other people is measured by specialised Organisations of Associated Labour qualified and equipped for that purpose and designated by the relevant republic or provincial regulations.

#### Section 19

Radioactive lightning conductors may not be installed on houses, schools and other public buildings where children and youth gather or sojourn (cinemas, theatres, youth centres, sports centres, libraries, boarding schools, resorts, children's hospitals, maternity wards, etc.).

## Section 20

Regular medical radiography examinations of persons under sixteen years of age are prohibited.

Sources of ionizing radiations may be applied for medical purposes if an adequately specialised physician prescribes or approves the diagnostic or therapeutical procedure and if, under conditions provided for by this Act, an assessment is made of the medical justification for the scope of their application.

## Section 21

Organisations of Associated Labour, other self-management organisations and communities, bodies of socio-political communities as well as working people who with their personal labour independently perform a professional activity shall provide the workers, employed on posts involving exposure to ionizing radiations, with individual dosimeters and protective devices, ensure testing of the accuracy of such devices and provide for their utilisation by the workers during operation, take measures for protection of these workers and, if necessary, refer certain workers for medical examination and treatment.

Organisations, communities, bodies and workers referred to in paragraph 1 of this Section shall provide for the prescribed measurements of contamination or levels of exposure to ionizing radiations of the workers, the testing for contamination of objects, rooms and atmosphere inside the premises where sources of ionizing radiations are being operated as well as for occasional checking of the accuracy of the measuring instruments and protective devices.

## Section 22

Drinking water, foodstuffs and articles in common use which contain radioactive materials in excess of the prescribed limits of activity, may be used, traded or applied for their respective purposes under the conditions prescribed on the basis of this Act.

## Section 23

Organisations of Associated Labour which use nuclear facilities and uranium and thorium mines shall have their own radiation protection departments.

Organisations of Associated Labour which use other sources of ionizing radiations must employ a qualified person who shall be responsible for protection against ionizing radiations.

## Section 24

Organisations of Associated Labour, other self-management organisations and communities as well as working people who with their personal labour independently perform a professional activity and who, while working with

sources of ionizing radiations, cause contamination of the environment in excess of the prescribed limits, shall carry out decontamination through their own departments or through organisations designated for that purpose by the relevant republic or provincial regulation.

#### Section 25

The protection of life and health of people from ionizing radiations must be ensured in the case of an unusual event and shall be carried out through measures designed to remove the danger caused by such events, individual and collective protection and through mobilisation of civil defence forces and resources.

The evacuation of the population and property from areas affected by ionizing radiations shall be carried out in the case of an unusual event, unless other measures established by this Act can provide for protection of the population or property.

Evacuation, as referred to in paragraph 2 of this Section shall be effected upon a decision of the competent body in the Republic or autonomous province, respectively.

#### Section 26

An Organisation of Associated Labour, or another self-management organisation, community or body of the socio-political community, which establishes irradiation of a particular area exceeding the limits prescribed by this Act or contamination by radioactive materials, shall immediately notify of such danger the relevant body designated by the republican or provincial regulation and the federal administrative body competent for public health.

If a risk of radioactive contamination of the territories of neighbouring countries is identified, the federal administrative body competent for public health shall inform the competent authorities of these countries accordingly.

Users of nuclear facilities must satisfy relevant technical and other conditions which make possible direct and fast communication and receipt of notifications referred to in paragraph 1 of this Section as well as other notifications and information related to the safety of nuclear facilities.

#### Section 27

Organisations of Associated Labour, other self-management organisations, communities and bodies of socio-political communities engaged in the production, trade, export or utilisation of sources of ionizing radiations shall keep records accounting for these sources and shall notify the competent body designated by the republican or provincial regulation of any shipment thereof.

Organisations of Associated Labour designated to measure the level of exposure to ionizing radiations (Section 18, paragraph 2) shall keep records on irradiation of the population and persons occupationally exposed to ionizing radiation and submit information on such radiation to the bodies or organisations designated by the republican or provincial regulations.

### III. SPECIAL SAFETY MEASURES APPLIED TO NUCLEAR FACILITIES AND NUCLEAR MATERIALS

#### 1. Siting, construction and use of nuclear facilities

##### Section 28

A nuclear facility may be constructed only at a site covered by a physical and urban plan of the competent body of the Republic or autonomous province or by a decision in substitution of such a plan.

##### Section 29

The technical and other requirements for the siting and construction of a nuclear facility are evaluated on the basis of the analysis of all data relevant for an assessment of the potential environmental implications of the planned nuclear facility and possible effects of events occurring in the environment upon such a facility as well as of evidence that all requirements related to the country's security and nationwide defence system have been met.

##### Section 30

The analysis referred to in Section 29 of this Act as a special document of the applicant, shall in particular establish: dangerous natural and artificial phenomena which exist or may occur in the area of the anticipated site (eg. earthquakes, floods, landslides, explosion, fire, etc.) critical paths of irradiation of the population by radioactive materials, the danger emanating from the consequences of certain phenomena and the design basis required for the prevention of both such dangers and consequences thereof.

##### Section 31

The application for a site licence shall be accompanied by the evidence and analysis referred to in Section 29 of this Act as well as by other prescribed documentation which can be used to determine that the prescribed safety of the nuclear facility at a particular site has been secured.

### Section 32

The application for the construction permit for a nuclear facility shall have the following attachments: the site licence, the technical documentation for construction, the safety report, including relevant evaluations, as well as other prescribed documentation which can be used to determine that the prescribed safety has been secured.

The safety report shall contain: information on the nuclear facility and its impact on the environment, the project description, an analysis of the possible accidents and measures required to eliminate or reduce the risk for the population and personnel of the nuclear facility, arrangements for the disposal and safety of radioactive waste as well as other prescribed information.

The safety report must be amended in accordance with the changes which may arise in the project design during construction, commissioning, operation, utilisation and decommissioning of the nuclear facility.

### Section 33

Once constructed, a nuclear facility cannot be operated until the commissioning has proved that the measures anticipated by the Act and regulations passed on the basis of the Act have been complied with.

The operator of the nuclear facility shall, together with the application for the commissioning licence, supply the following documentation:

- 1) a safety report, including information on modifications and amendments made at the stage of the construction of the nuclear facility;
- 2) the results of successfully performed pre-operational tests;
- 3) the quality assurance of the installed equipment and materials;
- 4) the results of meteorological measurements completed at the site and of measurements of radiation emitted by natural and artificial sources in the vicinity of the nuclear facility;
- 5) the commissioning schedule;
- 6) information on professional qualifications, capabilities and operating experience as well as on health of the operating personnel managing the production process in the nuclear facility and licensed for such operation pursuant to the provisions of this Act;
- 7) information on the organisational structure of the department and devices for protection from ionizing radiations;
- 8) plans and measures for prevention of possible nuclear accidents as well as procedures to be applied in the event of such accidents;



- 9) the operational limitations and requirements at the commissioning stage;
- 10) information on the ensured physical protection of nuclear facilities and nuclear materials.

#### Section 34

The licence for commissioning of the nuclear facility shall be issued if on the basis of the tests of the quality of the works performed, of the pre-operational testing and of the documentation referred to in Section 33 of this Act, it is established that the conditions prescribed for the safety of nuclear facilities have been observed.

The body competent for issuing the operating licence for the nuclear facility shall define the operating conditions and limitations of the nuclear facility.

#### Section 36

A nuclear facility shall be designed, constructed, used and maintained according to Yugoslav standards, technical criteria and quality norms applied for products and services which provide for the prescribed safety of the nuclear facilities.

The quality of the materials and equipment for construction and maintenance of the nuclear facility must correspond to the prescribed Yugoslav standards, technical criteria and quality norms while the quality of services rendered during construction and maintenance of such facilities must comply with the prescribed standards.

#### Section 37

During the construction and utilisation of the nuclear facility rules established by international or other foreign technical regulations as well as international and foreign standards may be applied under the following terms:

- 1) if that has been anticipated on the basis of or within an international agreement ratified by the Socialist Federal Republic of Yugoslavia;
- 2) within a business and technical co-operation or a long-term production co-operation or an investment of resources of foreign persons into domestic Organisations of Associated Labour, providing that they are not contrary to regulations on Yugoslav standards, technical criteria or quality norms applied to products and services;
- 3) if a particular product, or production process or service or operation has not been regulated by Yugoslav standards, technical criteria or quality norms.

In cases referred to in sub-paragraphs 2 and 3 of this Section, rules established by international or foreign technical regulations or international and foreign standards may be applied upon a decision of the Federal Executive Council, taken at the proposal of the federal administrative body competent for nuclear energy and the federal organisation competent for standardisation.

#### Section 38

Licences for the site, construction, commissioning and operation of a nuclear facility are issued by the competent body in the Republic or autonomous province in accordance with law.

#### Section 39

The body referred to in Section 38 of this Act may issue the licence for the site, construction, commissioning and operation of the nuclear facility if the competent Commission for the Safety of Nuclear Facilities has established that the required conditions are met.

The Commission referred to in paragraph 1 of this Section is formed at the federal administrative body competent for nuclear energy.

The Commission referred to in paragraph 1 of this Section shall, upon the request of the body referred to in Section 38 of this Act, establish the execution of the prescribed explorations of the terrain, the adherence to adequate standards and norms as well as the fulfilment of other prescribed requirements concerning the quality of work performed and other prescribed or otherwise determined conditions of relevance for environmental protection and the safety of the nuclear facility.

The Commission referred to in paragraph 1 of this Section shall assess whether conditions mentioned in paragraph 3 of this Section have been met, on the basis of tests completed by the competent specialised and scientific organisations, and on the basis of the nuclear facility safety report and other information and documentation prepared and submitted by the operator of the nuclear facility concerned.

#### Section 40

Members of the Commission for the Safety of Nuclear Facilities shall be nominated by the federal administrative body competent for nuclear energy from the ranks of prominent experts in the field of nuclear energy and radiation protection, upon the proposal of the republican and provincial bodies, and of representatives of specific federal administrative bodies and organisations.

#### Section 41

Tasks and duties related to the management of the production process within the nuclear facility and tasks and duties of surveying such process may be carried out by workers who, in addition to requirements referred to in

Section 17 of this Act, also have specialised knowledge and physical, psychological and other capabilities for the performance of the relevant tasks or duties.

The federal administrative body competent for nuclear energy shall establish the tasks and duties which require compliance with the specific requirements referred to in paragraph 1 of this Section.

#### Section 42

The conformity with requirements referred to in Section 41, paragraph 1 of this Act and the testing of workers applying for specific tasks and duties is verified by a Commission designated for that purpose, whereas a certificate confirming compliance with these requirements is issued by the competent body of the Republic or autonomous province, respectively.

#### Section 43

The operation of a nuclear facility must be carried out according to operational and other technical instructions related to: all operational systems, the handling of nuclear materials, transportation of such materials, maintenance and surveillance of the systems, internal control and to procedures in the event of a nuclear accident.

The Organisation of Associated Labour, being the user of the nuclear facility shall, pursuant to the provisions of this Act, pass and apply instructions and other acts related to the operation of the nuclear facility and, in particular to the:

- 1) operation and procedures during the commissioning, normal operation and shutting down of the nuclear facility or parts thereof;
- 2) operation and procedures for maintenance, repair, examination and technical checks of the equipment;
- 3) operation and procedures for the handling of radioactive waste;
- 4) procedures for monitoring radioactivity in the nuclear facility and its surroundings;
- 5) organisation and functioning of and measures for protection against radiation in the nuclear facility and in the first aid unit;
- 6) programme and quality assurance of the performance and the equipment required for the safe operation of the nuclear facility;
- 7) plan and programme of measures in the case of a nuclear accident and other unusual events in the nuclear facility (equipment breakdown, etc);
- 8) programme of measures and procedures for the decommissioning of the nuclear facility.

#### Section 44

The Organisation of Associated Labour, being the user of the nuclear facility shall submit to the competent bodies in the Republic or autonomous province reports on:

- 1) any change intended or introduced in the process referred to in Section 43 paragraph 2, sub-paragraph 1 of this Act, of the equipment or the mode of operation determined by certain conditions or operational limits;
- 2) failures of equipment or accidents at the nuclear facility as well as measures taken to remedy the consequences of accidents;
- 3) mistakes of personnel in the operation of the nuclear facility;
- 4) exceeding the prescribed limits, quantities and activity of emissions of gaseous or liquid radioactive effluents or on deviations from the prescribed conditions under which such effluents may be released;
- 5) other circumstances of importance for the safety of the nuclear facility.

The Organisation referred to in paragraph 1 of this Section shall submit to the competent bodies, on a regular basis, reports on the operation of the nuclear facility, within the time-limits and in the manner prescribed by such bodies.

#### Section 45

Users of nuclear facilities and of other sources of ionizing radiations as well as competent bodies of socio-political communities shall provide conditions for the final disposal of the radioactive waste produced by such facilities or sources.

Users of nuclear facilities and competent bodies of socio-political communities shall, in co-operation with other interested organisations and communities, carry out the procedure for the conclusion of self-management agreements or social compacts establishing the joint basis for the final disposal of radioactive waste produced through the use of nuclear energy.

## 2. Trade in nuclear materials

#### Section 46

Uranium, thorium with natural isotopic composition, uranium depleted in the isotope 235, plutonium 239 and its heavy isotopes, uranium 233, uranium enriched in the isotope 235 as well as other nuclear raw materials and nuclear materials designated by the federal administrative body competent for nuclear energy (referred to hereinafter as nuclear materials) may be traded under conditions prescribed by this Act and by regulations passed on its basis.

#### Section 47

Trade in nuclear materials may be carried out by Organisations of Associated Labour which fulfil legally prescribed requirements and are given special approval to that effect by the competent body in the Republic or autonomous province, respectively.

Trading in nuclear materials across the borders of the SFR of Yugoslavia requires special approval issued by the federal administrative body competent for nuclear energy in agreement with the federal administrative bodies competent for national defence, foreign affairs and internal affairs.

#### Section 48

The Organisation of Associated Labour engaged in trade involving nuclear materials shall organise and continuously control compliance with the prescribed conditions and the application of measures anticipated for trade involving such materials.

The Organisation of Associated Labour referred to in paragraph 1 of this Section shall pass an act on the application of surveillance measures in trade involving nuclear materials.

#### Section 49

Nuclear materials traded can only be handled by adults who are professionally qualified for the handling of such materials.

Persons who have not been professionally qualified to handle nuclear materials may, under the supervision of other persons who have such qualifications, only carry, load, unload and store such materials, under the condition that they have previously been informed on the method of such work and the related hazards and protective measures.

#### Section 50

The Organisation of Associated Labour engaged in trade involving nuclear materials shall provide special storage and containers ensuring the protection of the environment.

Storage of nuclear materials as well as their containers shall be effected and maintained in accordance with the Yugoslav standards, technical criteria and quality norms applied to products and services.

Premises where nuclear material are stored shall be secured against unauthorised access.

#### Section 51

Nuclear materials may only be sold or assigned to Organisations of Associated Labour or other social legal persons authorised to procure them.

Approval for procurement of nuclear materials is issued by the competent body in the Republic or autonomous province, respectively.

Approval for procurement of nuclear materials shall not be issued to the user who does not comply with the requirements related to the storage, keeping and physical protection of these materials or lacks qualified personnel for the handling of these materials.

Approval for procurement of nuclear materials shall also be denied if the interests of the country's security or the nationwide defence system so warrant.

### Section 52

The transport of nuclear materials shall be carried out pursuant to the federal regulations governing the transport of hazardous materials and to the ratified international agreements on the transport of hazardous materials.

### 3. Accounting and control of nuclear materials

### Section 53

The Organisation of Associated Labour which, within its sphere of activity produces, processes, uses or stores nuclear materials shall keep records accounting for such materials by material balance areas and submit information related to such records to the competent republican or provincial body.

### Section 54

The competent republican or provincial bodies shall keep accounting records of nuclear materials for all material balance areas in the Republic or autonomous province and control the records kept by the Organisation of Associated Labour referred to in Section 53 of this Act.

The bodies referred to in paragraph 1 of this Section shall submit to the federal administrative body competent for nuclear energy, data on nuclear materials from the records they keep.

The federal administrative body competent for nuclear energy shall determine material balance areas for the whole territory of the SFR of Yugoslavia.

### Section 55

With a view to conducting inspections of nuclear materials the Organisation of Associated Labour referred to in Section 53 of this Act shall provide:

- 1) the place and facilities for the installation and unhampered functioning of the equipment prescribed for the control of nuclear materials;
- 2) the sealing of the facility or premises wherein the nuclear materials are kept.

If the equipment required for the control of nuclear materials is installed or if the facility or a certain part of the premises is sealed, the Organisation of Associated Labour referred to in paragraph 1 of this Section shall provide for unhampered functioning of the equipment or for the integrity of the seal.

#### Section 56

The federal administrative body competent for nuclear energy shall keep accounting records of nuclear materials and carry out other activities related to such records with a view to implementing international obligations of the SFR of Yugoslavia in the field of nuclear energy.

#### 4. Physical protection of nuclear facilities, nuclear materials and radioactive waste

#### Section 57

The Organisation of Associated Labour, being the user of the nuclear facility or nuclear materials shall organise or provide for physical protection of the nuclear facility, nuclear materials and radioactive waste.

The Organisation of Associated Labour referred to in paragraph 1 of this Section shall, by means of a self-management general enactment, establish measures for physical protection of nuclear facilities, nuclear materials and radioactive waste during their use, transport, processing or storage.

The enactment referred to in paragraph 2 of this Section shall be approved by the competent body in the Republic or autonomous province, respectively.

#### Section 58

The operator of a nuclear facility shall anticipate and apply all physical protection measures at the construction site, at the nuclear facility itself, at the building used by the nuclear facility or within it, as well as all measures for the protection of nuclear materials and radioactive waste from any damage, fire, theft or other harmful acts or events and for protection of the documentation related to the construction of the nuclear facility.

## Section 59

If the competent body in the Republic or autonomous province which surveys the application of physical protection measures deems it necessary, it can, on a temporary basis, determine and undertake particular physical protection measures for the nuclear facility, nuclear materials or radioactive waste.

## IV. SURVEILLANCE AND COMPETENT AUTHORITIES

### Section 60

Surveillance of the enforcement of this Act and regulations passed pursuant to it shall be carried out by the competent bodies in the Republic or autonomous province, respectively.

Notwithstanding the provisions of paragraph 1 of this Section trading in sources of ionizing radiations across the borders of the Socialist Federal Republic of Yugoslavia shall be supervised by the federal administrative body competent for public health and the federal administrative body competent for internal affairs.

### Section 61

Surveillance of the application of measures for the protection from sources of ionizing radiations and for the safety of nuclear facilities, produced, traded or used by the Yugoslav National Army shall, pursuant to this Act, be carried out by the competent military authorities.

Surveillance of the application of measures for the protection from sources of ionizing radiations and for the safety of nuclear facilities produced, traded or used for the purposes of the internal affairs authorities shall, pursuant to this Act, be carried out by the administrative bodies competent for internal affairs.

### Section 62

For the purpose of surveillance, the bodies referred to in Section 60 and 61 of this Act may, within the sphere of their activity:

- 1) order the remedy of deficiencies related to the operation of sources of ionizing radiations and to the physical protection of nuclear facilities and nuclear materials;
- 2) discontinue the operation of sources of ionizing radiations and revoke the licences for the utilisation of radiation sources;
- 3) discontinue the construction of nuclear facilities if their siting, construction or rehabilitation, commissioning or utilisation have not been approved until such approval has been acquired or until all



other prescribed or otherwise determined conditions have been complied with;

- 4) forbid the trading or transfer of sources of ionizing radiations across the borders of the Socialist Federative Republic Yugoslavia, or the transfer from one place to another in the SFR of Yugoslavia until all prescribed or otherwise determined conditions are met;
- 5) submit a request to bring legal action for an offence or a notification of an economic offence or criminal act if, in the course of their supervision they establish non-compliance with regulations which are sanctioned according to the provisions of this Act and other regulations.

In cases referred to in sub-paragraph 2, paragraph 1 of this Section the body which passed a ruling to discontinue the operation of sources of ionizing radiations or to revoke a licence for the use of radiation sources shall therein, determine the mode of further treatment and disposal of such sources.

An appeal against the ruling on measures referred to in paragraph 1 of this Section cannot delay the effectiveness of the ruling.

### Section 63

In discharging the responsibilities of the federal bodies for the enforcement of the provisions of this Act and regulations passed pursuant to it, relating to the: implementation of ratified international agreements, accounting for and control of nuclear materials as well as to Yugoslav standards, technical criteria and quality norms applied for products and services of interest for the whole country, in the case when surveillance over the enforcement of these regulations is carried out by the competent body in the Republic or autonomous province, respectively, the federal bodies have the right and responsibility to:

- 1) provide binding instructions to the competent body of the Republic or autonomous province, respectively;
- 2) if the competent administrative body in the Republic or autonomous province fails to carry out a particular administrative activity as authorised by this Act providing that non-performance of such administrative activity may have harmful effects, to perform this activity and inform the Federal Executive Council accordingly.

### Section 64

The competent republican or provincial bodies shall submit to the competent federal administrative bodies information and reports on the enforcement of this Act and regulations passed on its basis within the time-limits stipulated by such federal bodies.

## Section 65

The federal administrative body competent for public health shall pass the regulations relating to:

- 1) places, methods and time-limits for testing for contamination by radioactive materials of air, soil, rivers, lakes and the sea as well as precipitation and fallouts, drinking water, human and animal feed (Section 8);
- 2) the mode, volume and time-limits for regular testing for contamination by radioactive materials of the surrounding of nuclear facilities (Section 9);
- 3) the mode of collecting, accounting, processing, storing and final disposal as well as release of radioactive waste into the environment (Section 11);
- 4) the trading and utilisation of radioactive materials exceeding certain activity limits, X-ray machines and other apparatus producing ionizing radiations as well as measures for the protection from radiation of such sources (Sections 14 and 15);
- 5) professional qualifications, health requirements and examination of persons who may operate sources of ionizing radiations (Section 17);
- 6) levels of exposure to irradiation of the population and persons operating sources of ionizing radiations, which may not be exceeded, and measurements of the level of exposure to ionizing radiation of persons operating sources of radiation and to testing for contamination of their working environment (Section 18);
- 7) conditions for the application of sources of ionizing radiations for medical purposes (Section 20);
- 8) terms under which drinking water, foodstuffs and articles in common use may be traded if they contain radioactive materials exceeding the prescribed limits of activity (Section 22);
- 9) maximum established limits for radioactive contamination of the environment and to decontamination (Section 24);
- 10) mode of keeping records accounting for sources of ionizing radiations and irradiation of the population and persons occupationally exposed to the effects of ionizing radiation (Section 27).

The regulations referred to in sub-paragraphs 1, 4 and 9, paragraph 1 of this Article shall be passed by the federal administrative body competent for public health in agreement with the federal administrative body competent for internal affairs and the federal administrative body competent for national defence.

#### Section 66

The federal administrative body competent for nuclear energy shall pass the regulations relating to:

- 1) conditions for the siting, construction, commissioning, operation and utilisation of nuclear facilities (Sections 28, 29, 33 and 43);
- 2) elaboration and contents of safety reports and other documentation required to determine the safety of nuclear facilities (Section 32);
- 3) professional qualifications, experience, testing of knowledge and the certificate on the conditions fulfilled by persons responsible for specific tasks in nuclear facilities (Sections 41 and 42);
- 4) material balance areas and the mode of keeping the records accounting for nuclear raw materials and nuclear materials as well as to the submission of information contained in such records (Sections 53 and 54).

The regulations referred to in sub-paragraph 1, paragraph 1 of this Section shall be passed by the federal administrative body competent for nuclear energy in agreement with the federal administrative bodies competent for public health, national defence and internal affairs.

#### Section 67

The federal administrative body competent for agriculture shall pass regulations on the conditions governing the trading and utilisation of animal feed and raw materials for the production of fodder used as animal feed, which contain radioactive materials exceeding certain limits of activity.

#### Section 68

The administrative bodies competent for internal affairs shall, within the limits of their rights and responsibilities, assist the competent body for protection from ionizing radiations or the competent body for the safety of nuclear facilities in the enforcement of measures prescribed or anticipated by this Act, upon their request.

#### Section 69

The Federal Secretary for National Defence shall, according to the provisions of this Act, be authorised to prescribe precise conditions for the procurement, trading and utilisation of sources of ionizing radiations in the Yugoslav National Army as well as the mode of controlling such sources.

The Chief Executive Officer of the federal administrative body competent for internal affairs, shall, according to the provisions of this Act, be authorised to prescribe conditions for the procurement, trading and utilisation of sources of ionizing radiation by bodies of internal affairs as well as the way of controlling such sources.

## V. PENAL PROVISIONS

### Section 70

A fine of 500,000 to 10,000,000 dinars for an economic offence shall be imposed on the Organisation of Associated Labour or another legal person if they:

- 1) collect, treat, store or release radioactive waste into the environment or finally dispose of such materials contrary to the terms stipulated by the regulations passed on the basis of this Act (Sections 11 and 65, paragraph 1, sub-paragraph 3);
- 2) engage in trade involving drinking water or foodstuffs or other articles in common use which contain radioactive materials exceeding the prescribed limits of activity contrary to the provisions prescribed by this Act or regulations passed on the basis of this Act (Sections 22 and 65, paragraph 1, sub-paragraph 8);
- 3) cause, during the operation of sources of ionizing radiations, contamination of the environment in excess of the prescribed limits or fail to carry out decontamination in the manner established by this Act or other regulations passed on its basis (Sections 24 and 65, paragraph 1, sub-paragraph 9);
- 4) fail to anticipate or apply all physical protection measures at the construction site or the nuclear facility itself or the building which is of use to the nuclear facility or within it, or for nuclear materials and radioactive waste (Section 58).

The responsible person in the Organisation of Associated Labour or another legal person shall be fined 50,000 to 100,000 dinars for any act referred to in paragraph 1 of this Section.

### Section 71

A fine of 50,000 to 300,000 dinars shall be imposed for an offence on the Organisation of Associated Labour, user of the nuclear facility or another legal person if they:

- 1) fail to carry out regular checks for contamination by radioactive materials of the environment in their surroundings or to complete such checks according to the programme established in agreement with the federal administrative body competent for public health (Section 9);
- 2) fail to submit to the competent body in the Republic or autonomous province advance notification of their intention concerning the decommissioning of the nuclear facility (Section 12);

- 3) without prior approval of the body designated by the republican, or provincial regulations procure, engage in the trade or use of radioactive materials exceeding the prescribed limits, use of X-ray machines or other apparatus which produce ionizing radiation (Section 14);
- 4) carry out regular radiographical examinations of persons less than sixteen years old or apply sources of ionizing radiations for medical purposes contrary to the terms prescribed by this Act (Section 20);
- 5) do not provide workers, employed on posts involving exposure to ionizing radiations with individual dosimeters and other protective devices or fail to undertake other measures prescribed for the purpose of protecting such workers (Section 21, paragraph 1);
- 6) do not have their own departments for protection from ionizing radiations or an officer responsible for the implementation of radiation protection (Section 23);
- 7) do not amend the nuclear facility safety report pursuant to the changes which occurred in the project design during construction, commissioning, operation, utilisation or decommissioning of the nuclear facility (Section 32, paragraph 3);
- 8) engage in construction or commissioning or operation of a nuclear facility without approval by the competent body in the Republic or autonomous province (Section 38);
- 9) assign management of the production process in the nuclear facility or other tasks and duties involving control of the process to workers who lack adequate qualifications and operating experience or workers not licensed for such operation (Section 41);
- 10) do not provide special storage for nuclear materials or containers ensuring environmental protection or fail to secure against unauthorised access, premises where nuclear materials are being stored (Section 50, paragraphs 1 and 3);
- 11) engage in trade in nuclear materials or sell or assign nuclear materials, or procure nuclear materials without the approval of the competent body (Sections 47 and 51);
- 12) fail to keep accounting records, by material balance areas, of nuclear materials produced, processed, used or stored or to communicate data contained in such records to the competent body (Section 53);
- 13) fail to act according to the ruling of the competent body which has become effective and orders the taking of a certain action or safety measure aimed at protecting the environment from ionizing radiations or securing the safety of the nuclear facility anticipated by this Act (Section 62).

The responsible person in the Organisation of Associated Labour or another legal person shall also be fined 10,000 to 50,000 dinars for an offence for any act referred to in paragraph 1 of this Section.

## Section 72

A fine of 30,000 to 80,000 dinars shall be imposed on the Organisation of Associated Labour or another legal person if they:

- 1) employ or retain at a post exposed to ionizing radiations a person who may not operate sources of ionizing radiations or lacks the prescribed qualifications or does not satisfy the prescribed health requirements for operation of sources of ionizing radiations (Sections 16 and 17, paragraph 1);
- 2) install or fail to remove a radioactive lightning conductor from the houses, schools or other public buildings wherein children and youth gather or sojourn within the time-limits anticipated for the replacement of sources of ionizing radiation (Sections 19 and 76);
- 3) establish that a particular area has been irradiated beyond the limits prescribed on the basis of this Act or contaminated by radioactive materials, but fail to immediately inform the competent administrative bodies of such danger (Section 26, paragraph 1);
- 4) do not keep records accounting for sources of ionizing radiations produced, traded, imported or used by them or they fail to notify the competent body designated by the republican or provincial regulations on any supply thereof (Section 27, paragraph 1);
- 5) do not submit to the competent body a report containing information referred to in Section 44 of this Act.

The responsible person in the Organisation of Associated Labour or another legal person shall also be fined 10,000 to 30,000 dinars for an offence for any act referred to in paragraph 1 of this Section.

## Section 73

A fine of 30,000 to 80,000 dinars for an offence shall be imposed on the Organisation of Associated Labour designated to carry out measurements of the level of exposure to ionizing radiations if, in the performance of their activities, they fail to keep records on irradiation of the population or persons occupationally exposed to ionizing radiations or if they do not communicate information on irradiation to the designated bodies or organisations (Section 27, paragraph 2).

The responsible person in the Organisation of Associated Labour designated to perform measurements of the level of exposure to ionizing radiations shall also be fined 5,000 to 20,000 dinars for an offence for any act referred to in paragraph 1 of this Section.

#### Section 74

A fine of 30,000 to 80,000 dinars for an offence shall be imposed on a person who with his own labour independently performs a professional activity if he procures, trades or uses sources of ionizing radiations as follows:

- 1) if without prior approval of the body designated by the republican or provincial regulation he procures, trades or uses radioactive materials exceeding the prescribed limits of activity or uses X-ray machines or other apparatus producing ionizing radiations (Section 14);
- 2) if he does not provide the workers, employed on posts exposed to ionizing radiations, with individual dosimeters and protective devices or does not take other prescribed measures for the protection of these workers (Section 21, paragraph 1);
- 3) if during operation of sources of ionizing radiations he causes contamination of the environment in excess of the prescribed limits but fails to conduct the decontamination as prescribed by this Act and the regulations passed on its basis (Sections 24 and 65, paragraph 1, item 9);
- 4) if he fails to act according to the ruling of the competent body which has become effective and which orders the taking of a certain action or measure aimed at protection from ionizing radiations anticipated by this Act or another regulation passed on its basis (Section 62).

#### Section 75

A fine of 2,000 dinars shall be imposed on individual workers operating sources of ionizing radiations if during their employment they should refuse to submit themselves to a health examination within the established time-limits or do not use individual and other protective devices (Sections 17 and 21).

An offence referred to in paragraph 1 of this Section shall be established to have been committed and sanctioned by the authorised workers of the competent body for surveillance during the inspections of the sites where sources of ionizing radiations are operated.

### VI. TRANSITIONAL AND FINAL PROVISIONS

#### Section 76

The radioactive lighting conductors installed up to the date of entry into force of this Act on schools or other public buildings wherein children or youth gather or sojourn, shall be removed from such buildings within the time-limits established for the replacement of the source of ionizing radiation.

### Section 77

The competent federal administrative bodies shall pass regulations referred to in Sections 65, 66 and 67 of this Act within a year from the date of entry into force of this Act.

### Section 78

On the day of entry into force of this Act the Act on Protection against Ionizing Radiations (Official Gazette of the SFRY No. 54/76) shall cease to be valid.

The regulations passed on the basis of Section 30 of the Act on Protection against Ionizing Radiations (Official Gazette of the SFRY 54/76) shall cease to be valid on the date of entry into force of the regulations passed on the basis of Section 65 of this Act and within one year from the date of entry into force of this Act, at the latest.

### Section 79

This Act shall enter into force on the eighth day following the date of its publication in the Official Gazette of the SFRY.