NUCLEAR LAW Bulletin

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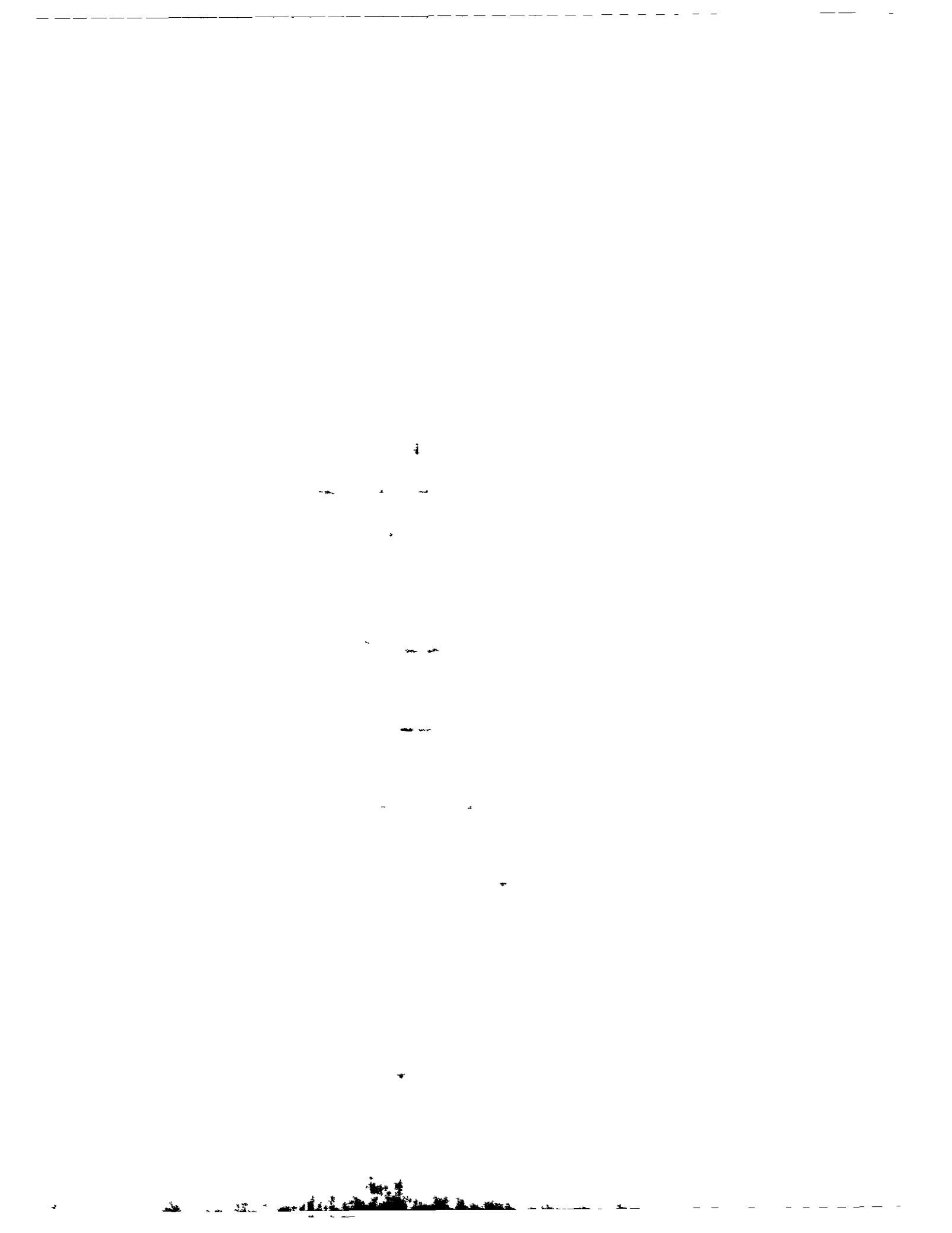
Contents

Nuclear Energy Agency

Organisation for Economic Co-operation and Development



FOREWORD

Readers of the Nuclear Law Bulletin will find a new "Bibliography" Chapter in this issue.

This survey, which does not claim to be comprehensive, aims to inform the reader about various publications on the legal aspects of nuclear activities issued in the past months and of which the Secretariat has had knowledge.

The notes in this Chapter give information on the contents of the publications but provide no comment. Each time the number of publications to be noted justifies it, the Bulletin will include a "Bibliography" Chapter.

LIST OF CORRESPONDENTS TO THE NUCLEAR LAW BULLETIN

ARGENTINA	- Mr. MARTINEZ FAVINI, Head of Legal Department, National Atomic Energy Commission
AUSTRALIA	- Mr. IKENBERG, International Relations and Technical Policy Division, Australian Atomic Energy Commission
AUSTRIA	- Dr. STEINWENDER, Director at the Federal Chancellery
BELGIUM	- Miss HARDENNE, Attaché to the Cabinet of the Minister of Economic Affairs
	- Mr. STALLAERT, Social Security Administration, Ministry of Employment and Labour
	- The Secretary General of the Prime Minister's Cabinet for Programmation of Scientific Policy
BRAZIL	- Mr. AYRTON SA PINTO DE PAIVA, Legal Adviser, Comissao Nacional de Energia Nuclear
CANADA	- Mr. MacISAAC, Legal Adviser, Atomic Energy Control Board
DENMARK	- Mr. ARILDSEN, Head of Section, Ministry of Justice
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FINLAND	- Mr. SUONTAUSTA, President of the Atomic Liability Committee
FRANCE	- Mr. VERGNE, Head of Legal Affairs, Atomic Energy Commission
GERMANY	- The Institute of Public International Law of Gottingen University, Department of Nuclear Law (Dr. PELZER)
GHANA	- Mr. LEBRECHT HESSE, State Attorney, Ministry of Justice
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ITALY	- Mr. MARCHETTI, Head of Legislative Office, Ministry of Industry, Commerce and Crafts
	- Dr NOCERA, National Committee for Nuclear Energy, Health Protection and Control Division
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	- Mr. RITCHIE, Deputy Legal Adviser of the Atomic Energy Authority of the United Kingdom
UNITED STATES	- Mr. BRUSH, Office of the General Counsel, United States Atomic Energy Commission
ZAIRE	- Mr. MALU WA KALENGA, Commissioner for Nuclear Science
ZAMBIA	- Mr. ZULU, Solicitor General, Ministry of Legal Affairs
IAEA	- Legal Division, International Atomic Energy Agency
EURATOM	- Legal Division, Commission of the European Communities
WHO	- Mr. DE MOERLOOSE, Head of the Health Legislation Unit, World Health Organization

LEGISLATIVE AND REGULATORY ACTIVITIES

• *Brazil*

THIRD PARTY LIABILITY

Bill on third party liability for nuclear damage

The Brazilian Government's decision to have the first Brazilian nuclear power station constructed by the partly State-owned "Electrobras" Company Ltd. has led to the preparation of appropriate legislation on nuclear third party liability.

Consequently, a Bill has just been drafted within the Ministry of Mines and Energy which will shortly be submitted for consideration by the National Congress, to be voted and enter into force in time for the start-up of plant operation.

This Bill is closely patterned on the principles contained in the Vienna Convention. It therefore provides for the absolute, sole and limited liability of the nuclear operator for nuclear damage. Such liability is limited to ten or twenty years according to the case and is waived in respect of armed conflict, civil war, natural disasters of a catastrophic nature etc.

These cases of exoneration from liability however, do not apply to workers in a nuclear installation, whose rights are governed by labour laws. Also, the Bill limits the liability of the operator to $ 50 million, a much higher amount than the minimum amount set by the Vienna Convention. The Federal Judge is declared solely competent to hear proceedings brought following a nuclear incident.

This regime for compensation of victims provides that physical injury must be compensated before damage to property.

The operator must cover his liability by means of insurance or financial security; it is provided, however, that the Government will compensate for damage of a catastrophic nature.

Voting of this Act should be accompanied by Brazilian ratification of the Vienna Convention; this ratification of the Vienna Convention will probably be the fifth, thus bringing it into force.

• *France*

REGIME OF NUCLEAR INSTALLATIONS

Decree No 73-405 of 27th March 1973 (Official Gazette of the French Republic of 4th April 1973)

The system of authorisation of large nuclear installations in France was laid down by a Decree dated 11th December 1963. This Decree was substantially amended and partly supplemented (Section 15) by a new Decree made on 27th March 1973.

It is recalled that the 1963 Decree as amended concerns the licensing procedure for large nuclear installations which are listed therein. This licensing procedure, which is co-ordinated by the Minister for Industrial and Scientific Development includes, barring derogations, a local enquiry followed by authorisation to construct The application is submitted for advice to an Interministerial Commission for large nuclear installations. The Commission also gives its advice on the definition of the special conditions required for the delivery of a licence to operate each nuclear installation.

The provisions of the Decree, as amended, are reproduced in the "Texts" Chapter of this issue.

• *Germany*

TRANSPORT OF RADIOACTIVE MATERIALS

Ordinance of 10th May 1973 on the Transport of Dangerous Goods by Road

The Federal Minister for Traffic has issued an Ordinance on the Transport of Dangerous Goods by Road, which entered into force on 1st July 1973. The Ordinance, which replaces the Ordinance on Protection against Damage caused by Transport of Dangerous Goods by Road of 23rd July 1970, lays down that certain categories of dangerous goods, including radioactive substances, may only be transported in conformity with the prescriptions of Annex A of the Ordinance. These prescriptions are based in particular on the European Agreement concerning the International Carriage of Dangerous Goods by Road (ADR).

This Ordinance does not affect the provisions of the Atomic Energy Act and the First Radiation Protection Ordinance.

• *Italy*

RADIATION PROTECTION

Decree of the President of the Republic of 12th December 1972 fixing the conditions for inclusion in the list of approved experts and authorised doctors in charge of the surveillance of radiation protection from the viewpoint of physics and medicine

This Decree published on 3rd May 1973 determines a number of general standards for the inclusion of approved experts and doctors These rules include among others

- a minimum age of 21 years;
- possession of the required university degree,
- a medical certificate confirming the physical fitness of applicant for medical surveillance.

To qualify for inclusion in the list of approved experts the candidate must be in possession of a degree in a certain number of subjects set out in the Decree, such as physics, chemistry, mathematics or medicine or surgery with a specialisation in radiology. In addition, he should have adequate knowledge of dosimetry and of the harmful effects of ionizing radiation. The Decree sets up within the Ministry of Labour and Social Welfare a Committee to examine the qualifications of the persons wishing to be included in the list of approved experts and to take the appropriate decision in each case. The members of this Committee and its Secretary have to be experts in the field of surveillance of radiation protection and their appointment must be approved by the Minister of Labour and Social Welfare.

The Decree also provides a list of authorised doctors in charge of the surveillance of ionizing radiations. To qualify for inclusion, a doctor must have a degree in medicine and surgery with at least three years' practical experience, and a diploma in industrial medicine or in medical radiology. A Committee within the Ministry of Labour and Social Welfare similar to the one for qualified experts decides upon the qualification of the applicants.

Experts and doctors are approved for inclusion in the list for a period of five years which is renewable.

REGIME OF RADIOACTIVE MATERIALS

Decree of 7th March 1973 amending the Decree of 15th December 1970 concerning exemptions from notifications and authorisations

This Decree made by the Minister for Industry, Commerce and Crafts and published in the Official Gazette of 18th April 1973, modifies Section 1(1) of the Decree of 15th December 1970 concerning exemptions from the obligation to notify and from authorisations as laid down by Act No. 1860 of 31st December 1962, in implementation of Act No. 1008 of

19th December 1969. The text of the 1970 Decree was published in Nuclear Law Bulletin No. 8. The amendment made by the Decree of 7th March 1973 excludes from the authorisation regime, in addition to substances containing a certain amount of natural or depleted uranium, substances containing thorium within the same quantitative limits as those applicable to uranium.

FOOD IRRADIATION

Ministerial Decree of 30th August 1973 authorising the preservation of potatoes, onions and garlic by means of gamma radiation treatment

This Decree made by the Health Minister and published in Official Gazette No.254 of 1st October 1973 authorises the possession of and trade in potatoes, onions and garlic which have been exposed to gamma radiation. The irradiated food may only be sold under appropriate packaging which indicates clearly that such food has been irradiated.

The Decree has been published under Act No. 283 of 30th April 1963 (Section 7) which empowers the Health Minister to authorise the possession of and trade in foodstuffs and beverages having undergone special treatment.

• *Japan*

THIRD PARTY LIABILITY

Amendment of Cabinet Order No. 44 on financial security

On 6th September 1971, Cabinet Order No. 44 of 13th March 1962 relating to the amount of financial security required by an operator for certain categories of nuclear installations was amended to take account of the Compensation Law (Act No. 147).

The following are the amounts of financial security required of an operator under the revised Cabinet Order

- a reactor whose thermal output exceeds 10,000 kW Yen 6 billion,
- a reactor whose thermal output is between 100 kW and 10,00kW Yen 1 billion,
- a reactor whose thermal output is less than 100 kW Yen 100 million,
- a plant for the fabrication of nuclear fuel Yen 100 million,
- a plant for the reprocessing of nuclear fuel Yen 6 billion;

- a plant utilising nuclear fuel Yen 100 million;

- transportation of nuclear fuel or material contaminated by nuclear fuel, material incidental to the operation of a reactor, or for purposes of fabricating, reprocessing or utilising nuclear fuel Yen 100 million;

- transportation of spent fuel incidental to the operation of the reactor or to reprocessing operations Yen 1 billion

The amounts given in the Study on Japanese nuclear third party liability legislation published in the Chapter "Miscellaneous" in Nuclear Law Bulletin No. 11 should therefore be amended accordingly

• *New Zealand*

RADIATION PROTECTION

Act No. 100 of 8th December 1971

The Health Act 1956 was amended by Act No. 100 of 8th December 1971 and published in the Statutes of New Zealand 1971, Volume 3, 1972 The amendment authorises the Minister for Health to make regulations concerning the use of and trade in devices and equipment emitting ionizing radiations other than X-rays or gamma rays.

Regulations No. 48 of 5th March 1973 on protection against ionizing radiation

These Regulations were made in implementation of the Radiation Protection Act 1965. The Regulations which came into force on 1st April 1973 by Decision of the Governor-General, submit the possession, production and use of radioactive materials as well as the use of radiation-emitting equipment to prior authorisation. However, these Regulations provide for a certain number of derogations from this regime (Schedule I). They specify the obligations of holders of radioactive materials or radiation-emitting equipment, as well as those of licence holders in the radiation protection field, especially regarding the organisation of the monitoring service, storage of materials, waste management and record keeping (Schedule II). The Regulations also determine the rules to be observed for the fitting up of workplaces and the measures to be taken in case of excessive irradiation (Schedule III). Finally, they lay down provisions concerning equipment for radiotherapy and diagnosis (Schedule IV). The Schedules to the Regulations give the maximum permissible doses and dose limits based on the recommendations of the International Commission on Radiological Protection, as well as the activities and concentrations of radioactive materials.

The entry into force of the present Regulations annuls the 1951 Regulation on radiation protection.

TRANSPORT OF RADIOACTIVE MATERIALS

Regulations of 5th March 1973 on the transport of radioactive materials

These Regulations were also made under the Radiation Protection Act 1965. The import, export and transport of radioactive materials in New Zealand are governed by these Regulations. The safety requirements laid down therein accord with those set out in the IAEA 1967 edition of the Regulations for the safe transport of radioactive materials, and for air transport, these requirements follow the International Air Transport Association (IATA) rules.

Publication of these Regulations annuls the 1951 Regulation on the transport of radioactive materials.

• *Norway*

NUCLEAR LEGISLATION

Amendment to the Atomic Energy Act of 12th May 1972

The Atomic Energy Act which came into force on 1st July 1973 to enable Norway to ratify the Paris Convention and the Brussels Supplementary Convention, was amended twice by Act No. 26 of 25th May 1973 (Section 24, Subsection 3) of the Atomic Energy Act and by Act No. 37 of 8th June 1973 (Section 27).

Amending Act No. 37 was made to enable Norway to ratify the Brussels Convention of 17th December 1971 relating to Civil Liability in the Field of Maritime Carriage of Nuclear Material. The texts of both amendments to the Atomic Energy Act are reproduced below*.

Section 24 (Absolute liability, etc.)

Subsection 3

Compensation for non-financial damage shall be payable only if the operator of the installation is liable for the damage by virtue of Chapter 3 in Act No. 26 of 13th June 1969 concerning indemnity.

Section 27 (Claims against persons other than the operator)

Subsection 1 no change.

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* The text of the Atomic Energy Act has been published in the Supplement to Nuclear Law Bulletin No. 11.

Subsection 2

If nuclear damage is caused by a nuclear incident during the maritime carriage of nuclear substances, the provisions in Subsection 1 shall apply correspondingly, provided that the operator is liable for such damage under the Vienna Convention or under a foreign act of legislation concerning liability for nuclear damage, and provided that such legislation is, in all respects, as favourable to the injured party as are the provisions laid down in the Paris or Vienna Conventions.

Subsection 3:

Claims for compensation for nuclear damage for which the operator is not liable under Section 24, Subsection 2 or Section 25 or corresponding provisions under another legislation or Convention as mentioned above in Subsections 1 or 2, may only be enforced against an individual person who has himself wilfully caused the damage. In cases of damage to a means of transport, as mentioned in the second sentence of Subsection 2 in Section 25, the operator shall furthermore - irrespective of provisions concerning liability exemptions under the legislation of the Installation State - be liable in accordance with the general rules of the law of torts, unless otherwise agreed.

Subsection 4

The provisions of this Section are not applicable in so far as they conflict with any international Convention in the field of transport to which Norway is a party.

Subsection 5

The provisions of Sections 39 - 44 shall apply as regards cover out of Government Funds.

• *Portugal*

REGIME OF NUCLEAR INSTALLATIONS

1972 Decree on the regime for licensing of nuclear installations

Decree-Law No. 49-398 of 24th November 1969 on the authorisation of industrial nuclear activities was supplemented by implementing Decree No. 487 made on 5th December 1972 and published in Official Gazette No. 282 first series, dated 5th December 1972. This new Decree which has already been mentioned in the Nuclear Law Bulletin (see Nuclear Law Bulletin Nos. 6 and 9) lays down the detailed provisions for the licensing of large nuclear installations for the generation of electrical energy. This procedure, which is carried out jointly by the Electricity Services Directorate General and the Junta de Energia Nuclear concerns the preliminary licence, then the construction licence and finally the operating licence. The provisions of this Decree are reproduced in the "Texts" Chapter of this issue of the Bulletin.

• *Sweden*

THIRD PARTY LIABILITY

Amendment of Nuclear Liability Act

The Swedish Government is actively preparing to ratify the 1971 Brussels Convention relating to Civil Liability in the Field of Maritime Carriage of Nuclear Material. At the same time, it is preparing a Bill including the amendments to be made for this purpose to the Nuclear Liability Act of 8th March 1968.

• *United States*

NUCLEAR LEGISLATION

New USAEC Regulations

Over the past few months, the Commission promulgated three Regulations which may be of general interest. The first was an amendment to the Commission's regulations at 10 CFR, Part 110, which broadened the general authorisation granted to U.S. persons to engage directly or indirectly in the production of special nuclear material outside the United States.

The second was the adoption of Appendices G and H to 10 CFR, Part 50, entitled, respectively, "Fracture Toughness Requirements" and "Reactor Vessel Material Surveillance Program Requirements". These are intended to implement General Design Criterion 31, "Fracture Prevention of Reactor Coolant Pressure Boundary", of 10 CFR, Part 50, Appendix A, "General Design Criteria for Nuclear Power Plants".

Third, on May 9, 1973, the Commission announced revisions in its criteria for the provision of uranium enrichment services. The criteria, established pursuant to Section 161.v. of the Atomic Energy Act, establish the general terms and conditions under which the AEC agrees to enter into uranium enrichment services contracts with domestic and foreign customers.

CASE LAW AND ADMINISTRATIVE DECISIONS

CASE LAW

• *Canada*

CONSTITUTIONAL VALIDITY OF THE ATOMIC ENERGY CONTROL ACT

On 18th December 1972 the Ontario High Court took its decision in a case Denison Mines Ltd. v. Attorney-General of Canada, which concerned the validity of the Canadian Atomic Energy Control Act. The action brought before the Court consisted in a claim for a declaration that the Atomic Energy Control Act was beyond the powers of the Parliament of Canada. The Court dismissed the action mainly on formal grounds, in considering that the action was a matter directly affecting the Crown and its right to control atomic energy and that, since Section 17(1) of the Federal Court Act provides that the Trial Division of the Federal Court has exclusive jurisdiction in such a case, the jurisdiction of the Ontario High Court was waived. At the same time the Court held that even if its jurisdiction were not waived, the Atomic Energy Control Act was valid legislation for the peace, order and good government of Canada as being a matter which, from its inherent nature, is of concern to the nation as a whole. In addition it was considered that the participation by Canada in the international control of the civilian uses of atomic energy required that the Parliament of Canada have internal domestic control and regulation over its production.

• *Spain*

LICENSING OF NUCLEAR INSTALLATIONS

On 19th January 1973, the Fourth Section for Administrative Appeals of the Supreme Court delivered a Judgment which constituted the first judicial decision made at that level in Spain in the nuclear field.

The administrative Decision challenged had been made on 11th November 1966 (Official Gazette of 5th December 1966) by the General Directorate for Energy, which authorised the "S.A. Hidroelectrica Española " to erect a nuclear power station ranging from 300 to 500 MWe on the site of Irta at Plà de Pebret (Castellón de la Plana), after compliance with the appropriate administrative formalities.

The validity of this Decision was contested by the Municipality of Peniscola, in respect of the boundaries of the site chosen for the power station, as well as by certain bodies responsible for town planning on the plea that this site was within a protected area preserved for touristic development.

The Supreme Court ruled on these appeals, declaring in its Judgment that these administrative Decisions concerning the fixing of the location were null and void in part as they were contrary to law.

This case stressed firstly the conflicting interests likely to arise today between the promotion of tourism and the need to ensure the generation of nuclear electricity. In fact the site decided for the power station was within a protected town-planning area in accordance with Peniscola's town-planning scheme which excluded all commercial and industrial applications. This scheme had been adopted by the Commission for the Provinces on 1st August 1960, and the delivery of a licence on a subsequent date therefore represented a specific derogation from such a scheme and was contrary to Spanish land use legislation.

The Supreme Court therefore considered that the Administration could neither ignore nor, even exceptionally, derogate from a town-planning scheme which had been properly adopted.

This case, however, raises the following question to what extent is it possible to rely on the judgment of municipal authorities for fixing the location of installations such as nuclear power stations which pose complex problems in this field ? These concern, in particular, safety as well as technical and economic factors - such a solution would lead to conflicts of competence between the Minister for Industry and local authorities.

It should also be noted that the Judgment concerned is based on rules and regulations in force at the time the disputable administrative Decisions were made, that is to say the 1964 Outline Act on nuclear energy and legislation applicable to industry in general. Consequently, in its Judgment, the Supreme Court did not take into account the provisions of the 1972 Regulations on nuclear and radioactive installations, which specify in fact that prior authorisation signifies official recog-

nition of the purpose of the installation as well as of its location, the local Administration cannot oppose this in any way, and under these Regulations it must obtain on its part the views of the municipal authorities involved.

It is assumed from the above that this Judgment is not intended to serve as a precedent as it was not based on the special regulations now in force in Spain in this particular field and which seem to settle the conflict of interests and competencies at the origin of the present case.

• *United States*

LICENSING OF NUCLEAR INSTALLATIONS

The case, "Ralph Nader v. Dixie Lee Ray" (Chairman of the USAEC), raised for the consideration of the US District Court, District of Columbia, the question of whether the AEC had the obligation to revoke the operating licenses of 20 named nuclear power reactors.

The plaintiffs, Ralph Nader and Friends of the Earth, alleged that the AEC, in view of Article 186(a) of the Atomic Energy Act and also of its own Regulations, was under the non-discretionary legal duty to revoke the above-mentioned licences. The issue raised by the plaintiffs concerned the emergency core cooling system (ECCS) of each of the named reactors. The ECCS is an engineered safety system whose function is to prevent the core of the reactor from attaining excessively high temperatures and experiencing loss of integrity in the event of a particular kind of hypothesized reactor accident, called a loss-of-coolant accident. The AEC Regulations require every light-water-cooled nuclear power reactor to contain an ECCS which must provide abundant emergency cooling. In order for the ECCS of such a reactor to be found acceptable by the AEC, it must be shown by complex computer calculations that the ECCS complies with certain criteria imposed by the AEC. These criteria are embodied in the AEC Regulations and are generally referred to as the Interim Acceptance Criteria.

The plaintiffs' complaint alleged (a) that the AEC's scientific advisers in ECCS matters are in virtually unanimous agreement that compliance by a reactor's ECCS with the Interim Acceptance Criteria was not sufficient to ensure the effectiveness of the ECCS, (b) that the AEC nevertheless had licensed and continued to permit the operation of the nuclear plants in question; (c) that the continued operation of these nuclear plants represented action beyond the AEC's statutory authority; and (d) that consequently the AEC was under a non-discretionary legal duty to revoke the licences of those plants.

Nineteen electric utility companies, which owned the nuclear plants filed motions to intervene and were admitted by the Court as co-defendants.

The Court gave its decision on 13th July 1973. In its decision the Court considered first of all that as highly complex matters of nuclear reactor technology were involved, the case should be resolved in the first instance by the AEC as the agency with expertise in those matters. Also, the plaintiffs had failed to invoke or exhaust any of the administrative or other remedies available to them, as neither plaintiff Nader nor plaintiffs Friends of the Earth had requested to be admitted as a participant in the ECCS Rulemaking or sought judicial review of the AEC's promulgation of the Interim Acceptance Criteria.

Apart from this the Court held that it could not assume jurisdiction, even if the plaintiffs had exhausted the available administrative remedies, as jurisdiction over the AEC's discretionary actions was exclusively vested in the US Courts of Appeals.

Moreover, the standard applied in issuing operating licences for nuclear power reactors is whether the AEC can find that there will be adequate protection to the health and safety of the public. Absolute certainty is not required by the Atomic Energy Act, nor does nuclear safety technology admit of such a standard. On the basis of the information submitted to it, the Court concluded that the AEC had fully met its statutory responsibilities with respect to ECCS safety matters and that, in consequence, there had been no violation of a non-discretionary, legal duty by the AEC.

Finally the Court considered that the plaintiffs had not presented any evidence that they would suffer injury from the denial of their request. Granting of the request by the plaintiffs would rather cause substantial injury to the consumers of electricity in several parts of the nation and to the intervenors.

On the basis of the foregoing conclusions the action of the plaintiffs was denied.

ADMINISTRATIVE DECISIONS

• *Indonesia*

ORGANISATION AND STRUCTURE

In Indonesia, the creation of a Ministry of State for Research has had an effect on nuclear activities. This Ministry is responsible for co-ordinating all national theoretical and applied research programmes including those in the nuclear field.

The National Atomic Energy Agency remains statutably under the supervision of the President, but from now onwards its research programmes will be placed under the authority of the Ministry for Research.

• *Sweden*

ORGANISATION AND STRUCTURE

A Governmental Committee to consider the problems caused by high-level wastes produced by nuclear power plants was set up by the Swedish Governmental Authorities on 28th December 1972. The members of the Committee as well as its advisory experts were appointed by the Minister for Industry on 25th April 1973.

The Committee's terms of reference in fact include the study of technical and economic problems and the safety problems raised by the treatment of highly-active wastes as well as the transport and storage of such wastes. In particular, the Committee is to consider whether a research programme on the treatment and storage of such wastes must be initiated in Sweden and must study the conditions for possibly organising the storage of radioactive wastes on national territory. In addition, the Committee is empowered to consider the regulations presently in force in this field and to propose amendments it deems appropriate.

INTERNATIONAL ORGANISATIONS AND AGREEMENTS

INTERNATIONAL ORGANISATIONS

• *Nuclear Energy Agency*

ADHESION OF AUSTRALIA TO NEA

Australia, which had already joined OECD on 7th June 1971, also decided to accede to the Statute of the Nuclear Energy Agency. It is recalled that NEA was established by a Decision of the OEEC Council in 1957. This Decision was subsequently amended twice and is generally referred to as the Statute of the Agency. In accordance with Article 20 of the Statute, members of the Agency are defined as those whose Governments participate in the Decision To give effect to Australia's wish to participate in the Agency, the OECD Council decided on 16th October 1973 that the Statute would apply to Australia as from 1st October 1973.

On its decision to join NEA, Australia became the twentieth Member of the Agency.

INAUGURAL SESSION OF THE EUROPEAN NUCLEAR ENERGY TRIBUNAL

The preceding issue of the Nuclear Law Bulletin had mentioned that the European Nuclear Energy Tribunal was beginning its second term of office on 1st March 1973, in accordance with the OECD Council Decision of 13th February 1973. The Judges of the Tribunal held their inaugural session at OECD Headquarters on 26th November 1973. This session was intended for the election of the President of the Tribunal and the designation of its Registrar, as well for settling certain practical matters to enable cases of litigation between Member countries to be brought before the Tribunal where necessary

The Judges elected Sir John Foster as President and Mr. von Busekist was appointed Registrar of the Tribunal The Judges also considered and approved the provisions of their Rules of Procedure, adopted during the Tribunal's first term of office.

REVISION OF THE PARIS CONVENTION

Article 22(c) of the Paris Convention provides that "a Conference shall be convened by the Secretary-General of OECD in order to consider revisions to this Convention after a period of five years as from the date of its coming into force...".

As five years have passed since the entry into force of the Paris Convention on 1st April 1968, this period came to expiry in Spring 1973, and the Steering Committee therefore invited the NEA Group of Governmental Experts on Third Party Liability in the Field of Nuclear Energy to study a number of questions raised by a possible revision of the text of the Convention and by the organisation of a Revision Conference.

After consideration of the various points, the Group of Experts concluded that the drawbacks of amending the Conference at present outweighed the advantages of such an exercise. At its last meeting in October 1973, the Group of Governmental Experts agreed that a revision of the Paris Convention would not be justified for the time being; it would be advisable on the other hand to review this matter at a later date in the light of the technological and economic evolution of the uses of nuclear energy.

RADIATION PROTECTION STANDARDS FOR GASEOUS TRITIUM LIGHT DEVICES

On 24th July 1973, the Council of the Organisation for Economic Co-operation and Development (OECD) adopted Radiation Protection Standards for Gaseous Tritium Light Devices. The purpose of these standards, which were established by the OECD Nuclear Energy Agency, is to promote a uniform course of action by the Member countries of the Organisation in respect of the manufacture, import, use and final disposal of such devices while ensuring adequate protection of users and the population at large against radiation hazards arising from their use. They are also designed to facilitate international trade The Decision of the Council recommends that the Governments of Member countries should base the measures to be taken to give adequate protection against hazards from such devices on these Radiation Protection Standards.

ARTICLE VI OF THE STATUTE

The amendment to Article VI of the Statute which was approved by the General Conference at its XVIth Regular Session entered into force on 1st June 1973 The amendment, the text of which is reproduced in Nuclear Law Bulletin No 6, provides for an increase of membership on the Board of Governors The following 34 Member States are now represented on the Board

Algeria	Germany, Fed Rep. of	Pakistan
Argentina	Ghana	Peru
Australia	Hungary	Philippines
Brazil	India	Saudi Arabia
Bulgaria	Indonesia	South Africa
Canada	Ireland	Sudan
Chile	Italy	Sweden
Costa Rica	Japan	Switzerland
Czechoslovak Socialist Republic	Korea, Rep of	USSR
Denmark	Lebanon	UK
France	Mexico	USA
Gabon		

XVIIth REGULAR SESSION OF THE GENERAL CONFERENCE

The XVIIth Regular Session of the General Conference was held in Vienna from 18th-24th September 1973. Upon recommendation of the Board, it approved the German Democratic Republic and the Republic of Mongolia for membership in the Agency thus bringing its members to 105 countries. The Conference adopted amendments to its Rules of Procedure to take account of the amendment to Article VI.A.2. of the Statute. It was also decided that a Working Group would assist the Secretariat in preparing a revised set of draft Rules of Procedure which would be considered by the Conference at its next session.

SAFEGUARDS

By 1st November 1973, the Treaty on the Non-Proliferation of Nuclear Weapons (NPT) had been ratified or acceded to by 81 States. Honduras, the Ivory Coast and Nicaragua have ratified the Treaty since 1st March 1973, the date of the list published in Nuclear Law Bulletin No. 11 Agreements for the application of Safeguards in connection with the Treaty are now in force with 28 States, 9 other such Agreements have been signed and 4 others approved by the Board.

THE IAEA RESPONSIBILITIES UNDER THE CONVENTION ON THE PREVENTION OF MARINE POLLUTION OF 1972

This subject was considered by a Panel composed of Experts from 18 Member States which met in Vienna from 4th-8th June 1973 The meeting was also attended by observers from 9 Member States and by representatives of 7 international organisations, including the OECD Nuclear Energy Agency. The Panel adopted unanimously a set of draft recommendations, which includes a definition of high-level radioactive wastes or other high-level radioactive matter unsuitable for dumping at sea, and proposals for the environmental and ecological evaluation of dumping applications in accordance with the Convention as well as for the operational control of the dumping of radioactive wastes or other radioactive matter not prohibited by the Convention.

The Panel stressed in a covering note to the draft recommendations that its proposals, which were based on scientific principles developed in the course of extensive work, particularly in marine radioecology, and took into account the various possible effects of dumping wastes at sea, should not be understood as encouraging such dumping without full consideration of the alternatives; and that man depended on both the sea and land and must protect both

The Director General has asked the Board of Governors to communicate their views on the content of the recommendations to him by 1st December 1973.

REGIONAL SEMINAR IN NUCLEAR LAW FOR LATIN AMERICAN COUNTRIES

The Seminar was held in Rio de Janeiro from 25th-29th June 1973 in collaboration with the Brazilian Nuclear Energy Commission It was intended for legal officers of national authorities on atomic energy and nuclear law experts. Seven Latin American countries were represented at the meeting while the invited experts came from six countries outside the region (Canada, Belgium, Federal Republic of Germany, Spain, UK and USA).

AGREEMENTS

• *United States*

AMENDMENT OF THE CO-OPERATION AGREEMENT WITH EURATOM

The Co-operation Agreement on the peaceful uses of nuclear energy concluded between the United States and the European Atomic Energy Community (Euratom) on 8th November 1958 and subsequently amended several times (as well as the Additional Agreement of 11th June 1960) was again amended on 20th September 1972. This amendment came into force on 28th February 1973 and is intended to reflect the changes in the United States Atomic Energy Commission policy on the supply of enriched uranium to the Community.

The amendment to the Co-operation Agreement between the United States and Euratom has led to the amendment, on 14th August 1973, of Section 5 of the Euratom Co-operation Act of 1958. This amendment of Section 5 consists of replacing the words "two hundred fifteen thousand kilograms of contained uranium 235" by the words "an amount of contained uranium 235 which does not exceed that necessary to support the fuel cycle of power reactors located within the Community having a total installed capacity of thirty five thousand megawatts of electric energy, together with twenty five thousand kilograms of contained uranium 235 for other purposes". The aim of this amendment is to increase the amount of contained uranium 235 which may be supplied to Euratom pursuant to Section 54 of the Atomic Energy Act of 1954, as amended, concerning foreign distribution of special nuclear material.

CO-OPERATION AGREEMENT ON PEACEFUL USES OF ATOMIC ENERGY

The United States of America and the Union of Soviet Socialist Republics signed an Agreement on Scientific and Technical Co-operation in the Field of Peaceful Uses of Atomic Energy on 21st June 1973, which came into force on that date and will remain in force for ten years.

Both parties will promote the exchange of information in the nuclear field and mutual visits on the basis of the Memorandum on Co-operation on the Peaceful Uses of Atomic Energy of 28th September 1972 between the US Atomic Energy Commission and the USSR State Committee for the Utilisation of Atomic Energy, and with the conclusion of the present Agreement, the scope of co-operation has been expanded to include the joint R and D on future technology, such as thermonuclear fusion and fast breeder reactors

AGREEMENT ON THE PREVENTION OF NUCLEAR WAR

On 22nd June 1973, the United States and the Soviet Union signed an Agreement on the Prevention of Nuclear War, which came into force on that day and is of unlimited duration

Under the Agreement, the Parties agreed to act in a manner which would prevent the development of situations capable of causing a dangerous exacerbation of their relations, and which would exclude the outbreak of nuclear war between them and between either of the Parties and other countries.

• *Norway*

RATIFICATION OF THE PARIS CONVENTION AND THE BRUSSELS SUPPLEMENTARY CONVENTION

Following the entry into force on 1st July 1973 of the Atomic Energy Act of 12th May 1972, Norway ratified the Paris Convention on 2nd July 1973 and the Brussels Supplementary Convention on 9th July 1973. It is provided that Sections 40 and 41 of the Atomic Energy Act which deal with the provisions of the Brussels Supplementary Convention, will be implemented only when the latter comes into force

The ratification by Norway of the Paris Convention and the Brussels Supplementary Convention now brings the Contracting Parties to both Conventions to 9 and 5 respectively.

• *Portugal*

DECREE No 487 OF 5TH DECEMBER 1972
ON THE PROCEDURE FOR THE LICENSING OF NUCLEAR INSTALLATIONS*

(Published in Official Gazette No. 282, 1st Series, 5th December 1972)

The Government decrees

Section 1

The establishment of nuclear power stations for the production of electricity is governed by the provisions of Decree-Law No. 49-398 of 24th November 1969, as well as by the regulations applicable to power stations and nuclear installations and must be preceded by the delivery of a provisional licence.

Section 2

(1) The request for a provisional licence which must include all the information required for an assessment from the technological and economic points of view as well as from the points of view of the safety of the power station and its siting must be sent to the General Directorate for Electrical Services which will send a copy thereof to the Junta de Energia Nuclear requesting the opinion of the latter.

(2) The General Directorate for Electrical Services and the Junta de Energia Nuclear may contact the applicant directly and agree on the choice of the Ministerial Departments and other bodies to be consulted; the latter must decide, in their own area of competence, within 60 days, a lack of reply signifying their agreement on the application.

(3) The General Directorate for Electrical Services and the Junta de Energia Nuclear will, on receival, exchange copies of the opinions of the bodies consulted in accordance with the provisions of the above paragraph.

(4) The General Directorate for Electrical Services and the Junta de Energia Nuclear decide on the validity of the information referred to in paragraph (1).

* Unofficial translation prepared by the Secretariat.

Section 3

(1) The General Directorate for Electrical Services must publish notifications of the request for a provisional licence in the Official Gazette (Diario do Governo) as well as in three widely distributed daily newspapers, the General Directorate must send to the Municipal Council of the District where it is planned to set up the power station, one copy of these notifications in order that they should be posted within 15 days in a thoroughfare and published in the local newspaper, where there is one.

(2) These notifications must be published in the Official Gazette and in daily newspapers for three consecutive days and they must be kept posted for 15 days.

(3) The General Directorate for Electrical Services must communicate to interested persons the request made by the applicant and the relevant data within a period of 30 days starting from the last day of publication of the notification in the Official Gazette

(4) Objections must be sent directly to the General Directorate for Electrical Services or to the Municipal Council mentioned in the above paragraph, in the latter case, the Municipal Council must transmit them within the eight following days to the General Directorate.

(5) The General Directorate for Electrical Services sends to the Junta de Energia Nuclear one copy of all the objections it has received directly or through the Municipal Council.

Section 4

The General Directorate for Electrical Services is responsible for all the procedure relating to a provisional licence and, in collaboration with the Junta de Energia Nuclear, prepares a report for the Government, accompanied by the opinion of the Commission for Fuels and Nuclear Power Stations.

Section 5

(1) The Government grants the provisional licence for the establishment of a power plant on the site proposed.

(2) The provisional licence remains subject to the compliance of the applicant with the conditions set. This concerns in particular, the time allowed for putting forward the request for a construction licence.

(3) The provisional licence enables the undertaking having made the application to benefit from the facilities provided by Section 7 of Decree-Law No. 49-398.

Section 6

(1) Construction of a nuclear power station is subject to prior authorisation

(2) The request for a construction licence giving all the information required for an assessment, including the preliminary safety report, must be sent to the General Directorate for Electrical Services which sends a copy thereof to the Junta de Energia Nuclear requesting the opinion of the latter

(3) The General Directorate for Electrical Services and the Junta de Energia Nuclear may contact the applicant directly and agree on the choice of the bodies to be consulted, the latter must decide, in their own area of competence, within 60 days, a lack of reply signifying their agreement on the application.

(4) The General Directorate for Electrical Services and the Junta de Energia Nuclear will, on receival, exchange copies of the opinions of the bodies consulted in accordance with the provisions of the above paragraph.

Section 7

The composition of the preliminary safety report referred to in paragraph 2 of the preceding Section is decided on a case-by-case basis by the Junta de Energia Nuclear and by the General Directorate for Electrical Services.

Section 8

The applicant may be invited either by the General Directorate for Electrical Services or by the Junta de Energia Nuclear to complete or amend the project or to supply certain information or additional clarifications for the purposes of the procedure.

Section 9

The General Directorate for Electrical Services is responsible for all the procedure relating to a construction licence and, in collaboration with the Junta de Energia Nuclear, prepares a report for the Government

Section 10

(1) The Government grants the licence for the construction of a power station.

(2) The construction licence remains subject to the compliance of the applicant with the conditions set.

Section 11

(1) Construction of the power station, including manufacture of the components and the tests remain subject to standing inspections by the General Directorate for Electrical Services and the Junta de Energia Nuclear in the fields of electrical safety and nuclear safety respectively.

(2) The general inspection plan is prepared by a working party made up of representatives of the General Directorate for Electrical Services and the Junta de Energia Nuclear who are attached to the inspection services; the working party is assisted by a representative of the undertaking holding the construction licence.

Section 12

(1) The following are subject to authorisation by the General Directorate for Electrical Services and the Junta de Energia Nuclear

(a) initial fuel charge;

(b) nuclear and pre-operational tests;

(c) power ramp and provisional operation.

(2) Before obtaining these authorisations, the undertaking must first present the final safety report and the detailed programme of these operations.

(3) The authorisations required in accordance with paragraph 1 are granted in the order given above and depend on the results obtained during the phase immediately prior to the particular request, while remaining subject to compliance of the holder of the authorisation with the conditions set, taking safety considerations into account.

(4) The equipment of the power station and the nuclear fuel charge can only be authorised if the "operator" Company provides proof that it holds a guarantee in accordance with the Act on third party liability for nuclear hazards.

Section 13

The composition of the final safety report referred to in paragraph 2 of the preceding Section, is decided on a case-by-case basis by the Junta de Energia Nuclear and the General Directorate for Electrical Services who may request the holder of the authorisation to complete the report or to amend it.

Section 14

(1) Operation of the power station is subject to prior authorisation.

(2) The request for an operating licence must be sent to the General Directorate for Electrical Services which requests the opinion of the Junta de Energia Nuclear.

Section 15

The General Directorate for Electrical Services is responsible for all the procedure relating to the operating licence and, in collaboration with the Junta de Energia Nuclear, prepares a report for the Government.

Section 16

(1) The Government grants the licence for the operation of a power station.

(2) The operating licence is subject to the compliance of the applicant with the conditions set

Section 17

Operation of the power station is subject to standing inspections by the General Directorate for Electrical Services and the Junta de Energia Nuclear in the fields of electrical safety and nuclear safety respectively.

Section 18

(1) The Company operating the power station must keep operating records, the model of which must be approved by the General Directorate for Electrical Services and the Junta de Energia Nuclear.

(2) The operating records mentioned in the preceding paragraph must be made available at all times to the bodies responsible for inspections.

Section 19

Alterations to the power station which affect the safety or operating conditions must be approved by the Junta de Energia Nuclear and by the General Directorate for Electrical Services.

Section 20

The qualifications required of the staff responsible for operating the reactor are determined by the Junta de Energia Nuclear.

Section 21

The powers vested in the Government under this text must be exercised in accordance with the provisions of Section 12 of Decree-Law No. 49-398.

Section 22

Matters which are not specific to nuclear power stations, namely, those relating to payment of taxes are governed by the legal provisions applicable to other types of power-producing stations insofar as they do not derogate from the present Decree.

Section 23

The uncertainties which should arise in the interpretation or implementation of the present Decree must be settled by joint decision of the Prime Minister and the Secretary of State for Industry, after consultation with the Junta de Energia Nuclear and the General Directorate for Electrical Services.

Done on 20th November 1972.

MODEL FOR BILATERAL AGREEMENTS ON THE VISITS OF NUCLEAR SHIPS*

Note by the Secretariat

This Model for Agreements on visits of nuclear ships was prepared within the Group of Governmental Experts on nuclear third party liability. At its meeting on 19th October 1972, the Steering Committee took note of this Model (see Nuclear Law Bulletin Nos. 9 and 10). As since then, the Secretariat has received a certain number of requests for the Model, it was decided to reproduce it in this issue.

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Article 1

For the purpose of this Agreement

(a) "Nuclear ship" means any ship equipped with a nuclear power plant, with the exception of a warship.

(b) "Licensing State" means the Contracting State which operates or which has authorised the operation of a nuclear ship under its flag.

(c) "Operator" means the person authorised by the Licensing State to operate a nuclear ship, or a Contracting State operating a nuclear ship.

(d) "Visit of a nuclear ship" means the entry and stay of that ship in the territorial waters, the internal waters or the harbours of the Host State.

(e) "Host State" means the Contracting State which receives a visit by a nuclear ship

(f) "Nuclear fuel" means any material which is capable of producing nuclear fuel, made radioactive by neutron irradiation incidental to the utilisation of nuclear fuel in a nuclear ship.

(g) "Radioactive products or waste" means any material, including nuclear fuel, made radioactive by neutron irradiation incidental to the utilisation of nuclear fuel in a nuclear ship.

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* The fact that the various footnotes to this Model Agreement allow certain derogations from the text shall not be taken to preclude the Contracting Parties from making drafting amendments or otherwise derogating from this Model Agreement if they consider it appropriate.

(h) "Nuclear damage" means loss of life or personal injury and loss or damage to property which arises out of or results from the radioactive properties or a combination of radioactive properties with toxic, explosive or other hazardous properties of nuclear fuel or of radioactive products or waste; any other loss, damage or expense so arising or resulting shall be included only if and to the extent that the applicable national law so provides.

(i) "Nuclear incident" means any occurrence or series of occurrences having the same origin which causes nuclear damage.

(j) "Nuclear power plant" means any power plant in which a nuclear reactor is, or is to be used as the source of power, whether for propulsion of the ship or for any other purpose.

(k) "Nuclear reactor" means any installation containing nuclear fuel in such an arrangement that a self-sustained chain process of nuclear fission can occur therein without an additional source of neutrons

(l) "Warship" means any ship belonging to the naval forces of a State and bearing the external marks distinguishing warships of its nationality

(m) "Applicable national law" means the national law of the Court having jurisdiction under the present Agreement including any rules of such national law relating to conflict of laws.

Article 2

This Agreement shall apply to visits of nuclear ships whose operation has been authorised by the Licensing State or which are operated by it*.

Article 3

(a) Visits of nuclear ships shall be subject to the prior authorisation of the Host State insofar as such authorisation is required by the authorities of that State in accordance with its national legislation and international law.

(b) The request for authorisation shall reach the competent authorities of the Host State in good time** and shall be accompanied by the documents required by the Host State.

(c) In addition to the request for authorisation, the first entry of a ship into a harbour of the Host State must be the subject of a prior notification which shall specify the harbour(s) to be visited and which

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* For the implementation of Article 2, see the footnote to Article 4(a)

** A period may be fixed by the Contracting Parties.

must reach the competent authorities of the Host State sixty days* prior to such entry, this prior notification shall be set at thirty days* for subsequent visits of the ship to the same harbours.

(d) The authorisation shall be valid for all the visits of the nuclear ship, for as long as it has not been withdrawn by the Host State.

Article 4

(a) The operator of the nuclear ship shall be absolutely liable in accordance with this Agreement for any nuclear damage upon proof that such damage has been caused by a nuclear incident, wherever it occurs, involving the nuclear ship or radioactive products or waste produced in that ship, when such damage has been suffered in the territory or the territorial waters of the Host State or on a ship registered in that State, during a visit to that State or during a voyage to or from that State**.

(b) Except as otherwise provided in this Agreement no person other than the operator shall be liable for such nuclear damage.

(c) Nuclear damage suffered by the nuclear ship itself, its equipment, fuel or stores shall not be covered by the operator's liability as defined in this Agreement.

(d) Where provisions of national health insurance, social insurance, social security, workmen's compensation or occupational disease compensation systems include compensation for nuclear damage, rights of beneficiaries under such systems and rights of subrogation, or of recourse against the operator, by virtue of such systems, shall be determined by the law of the Contracting State having established such systems.

(e) The operator shall not be liable with respect to nuclear incidents occurring before the nuclear fuel has been taken in charge by him or after the nuclear fuel or radioactive products or waste have been taken in charge by another person duly authorised by law and liable for any nuclear damage that may be caused by them.

(f) If the operator proves that the nuclear damage resulted wholly or partially from an act or omission done with intent to cause damage by the individual who suffered the damage, the competent courts may exonerate the operator wholly or partially from his liability to such individual.

(g) Notwithstanding the provisions of paragraphs (a) and (b) of this Article, the operator shall have a right of recourse

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* A different time-limit can be fixed by the Contracting Parties.

** The Contracting Parties may extend the liability regime laid down in the present Agreement to cases where the nuclear incident occurs in the course of a voyage which is not connected with a visit to the Host State.

(i) if the nuclear incident results from a personal act or omission done with intent to cause damage, in which event recourse shall lie against the individual who has acted or omitted to act, with such intent;

(ii) if the nuclear incident occurred as a consequence of any wreck-raising operation of the nuclear ship, against those who carried out such operation without the authority of the operator or that of the Licensing State, or that of the Host State;

(iii) if recourse is expressly provided for by contract.

Article 5

(a) The liability of the operator as regards one nuclear ship shall be limited to 100 million European Monetary Agreement* units of account in respect of any one nuclear incident, notwithstanding that the incident may have resulted from any fault of privity of that operator Such limit shall include neither any interest nor costs awarded by a court in actions for compensation under this Agreement.

(b) No limitation of liability, whether resulting from an international convention or national legislation in the maritime field, shall be put forward to defeat claims for compensation made in implementation of the present Agreement.

(c) The operator shall be required to maintain insurance or other financial security covering his liability for nuclear damage, in accordance with this Agreement. The amount, the type and the terms of the insurance or other financial security shall be specified by the Licensing State. That State shall ensure the payment of claims for compensation for nuclear damage established against the operator by providing the necessary funds up to the limit laid down in paragraph (a) of this Article to the extent that the yield of the insurance or other financial security is inadequate to satisfy such claims.

(d) The operator shall be required to produce at the request of the competent authorities of the Host State a certificate issued by or on behalf of the insurer or any other person having furnished financial security in accordance with paragraph (c) above. The certificate shall mention the name and address of the operator, as well as the object, amount, type and duration of such security. The information set out in the certificate shall at all times conform to the financial security maintained by the operator in accordance with paragraph (c) above, and may not be disputed by the person by whom or on behalf of whom it has been furnished.

(e) Each Contracting State undertakes to adopt such measures as are necessary to ensure implementation of the provisions of this Agreement, including all appropriate measures for the prompt and equitable distribution of the sums available for compensation for nuclear damage

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* However, this amount may be increased by common agreement between the Contracting Parties.

(f) Each Contracting State undertakes to adopt such measures as are necessary to ensure that insurance and reinsurance premiums and sums provided by insurance, reinsurance or other financial security, or provided by it in accordance with paragraph (c) above shall be freely transferable into the currency of the Contracting State in which the damage was sustained, of the Contracting State in which the claimant is habitually resident, or as regards insurance and reinsurance premiums and payments, in the currencies specified in the insurance or reinsurance contract.

Article 6

Whenever both nuclear damage and damage other than nuclear damage have been caused by a nuclear incident, or jointly by a nuclear incident and one or more other occurrences and the nuclear damage and such other damage are not reasonably separable, the entire damage shall, for the purposes of this Agreement, be deemed to be nuclear damage exclusively caused by the nuclear incident. However, where damage is caused jointly by a nuclear incident covered by this Agreement and by an emission of ionizing radiation or by an emission of ionizing radiation in combination with the toxic, explosive or other hazardous properties of the source of radiation not covered by it, nothing in this Agreement shall limit or otherwise affect the liability, either as regards the victims or by way of recourse or contribution, of any person who may be held liable in connection with the emission of ionizing radiation or by the toxic, explosive or other hazardous properties of the source of radiation not covered by this Agreement

Article 7

(a) Rights of compensation arising from Article 4 shall be extinguished if action is not brought within ten years* from the date of the nuclear incident**

(b) Where nuclear damage is caused by nuclear fuel, radioactive products or waste which were stolen, lost, jettisoned or abandoned, the period established by paragraph (a) above shall be computed from the date of the nuclear incident causing the nuclear damage; it shall in no case exceed a period of twenty years from the date of the theft, loss, jettison or abandonment**.

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* The Contracting Parties may provide by common agreement for a longer period with respect to compensation for deferred damage.

** The Contracting Parties may set a period of limitation of not less than three years from the date on which the person who claims to have suffered nuclear damage had knowledge or ought reasonably to have had knowledge of such damage and of the person liable therefor, provided that the time-limits established by paragraphs (a) and (b) shall not be exceeded.

(c) Any person who claims to have suffered nuclear damage and who has brought an action for compensation within the period applicable under this Article may amend his claim to take into account any aggravation of the damage, even after the expiry of that period, provided that final judgment has not been entered.

Article 8

(a) Where nuclear damage engages the liability of more than one operator and the damage attributable to each operator is not reasonably separable, the operators involved shall be jointly and severally liable for such damage. However, the liability of any one operator shall not exceed the limit laid down in Article 5.

(b) In the case of a nuclear incident where the nuclear damage arises out of or results from nuclear fuel or radioactive products or waste of more than one nuclear ship of the same operator, that operator shall be liable in respect of each ship up to the limit laid down in Article 5.

(c) In case of joint and several liability, and subject to the provisions of paragraph (a) of this Article

(i) each operator shall have a right of contribution against the others in proportion to the fault attaching to each of them,

(ii) where circumstances are such that the degree of fault cannot be apportioned, the total liability shall be borne in equal parts.

Article 9

No liability under this Agreement shall attach to an operator in respect of nuclear damage caused by a nuclear incident directly due to an act of war, hostilities, civil war or insurrection.

Article 10

In the event of an incident likely to involve the liability of the operator pursuant to this Agreement, the master of the nuclear ship involved shall immediately notify the competent authorities of the Host State and the authorities of the Licensing State, as well as the insurer or any other person who has furnished security in accordance with Article 5(c) above.

Article 11

(a) Under this Agreement, any action for compensation for nuclear damage shall be brought before the competent courts of the Host State*

* Another solution may be adopted by common agreement between the Contracting States so long as one single court is declared competent.

(b) If under this Agreement an action is brought before the court competent in accordance with this Article, no jurisdictional immunities may be invoked.

(c) If the Licensing State has been or might be called upon to ensure the payment of claims for compensation in accordance with paragraph (c) of Article 5 of this Agreement, it may intervene as party in any proceedings brought against the operator.

Article 12

(a) A final judgment entered by the court of a Contracting State having jurisdiction under Article 11 shall be recognised in the territory of the other Contracting State, except

(i) where the judgment was obtained by fraud, or

(ii) the operator was not given a fair opportunity to present his case.

(b) A final judgment which is recognised shall, upon being presented for enforcement in accordance with the formalities required by the legislation of the Contracting State where enforcement is sought, be enforceable as if it were a judgment of a court of that State.

(c) The merits of a claim on which the judgment has been given shall not be subject to further proceedings.

Article 13

Unless this Agreement provides to the contrary the legislation of the State of the competent court shall apply in a subsidiary capacity.

STUDIES AND ARTICLES

ARTICLES

REGIME GOVERNING NUCLEAR INSTALLATIONS IN FRANCE AFTER THE 1973 REFORMS

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INTRODUCTION

Nuclear installations for the purposes of the present Article are the "Large Nuclear Installations" listed in Section 2 of Decree No. 63-1228 of 11th December 1963, amended by Decree No. 73-405 of 27th March 1973.

Generally speaking this list is, intentionally, the same as that in Article 1(a)(ii) of the Paris Convention on Third Party Liability in the Field of Nuclear Energy. It does not therefore include reactors comprised in a means of transport (1). The French list differs however in two respects from that of the Paris Convention. On the one hand, Orders of 6th December 1966 and 25th January 1967 anticipating a

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

(1) In accordance with the SOLAS Convention of 16th June 1960, ratified by France and published by Decree No. 65-445 of 29th May 1965, the first regulations concerning the safety of nuclear ships ("ship with a nuclear power source") were laid down in France by Decrees No. 68-206 of 17th February 1968 and No. 69-169 of 4th February 1969. These regulations do not however concern warships (Act No. 67-405 of 20th May 1967).

possible decision by the Steering Committee of the Nuclear Energy Agency, excluded from the scope of the Decree, either installations for manufacture, processing and conversion, or installations for storage, deposit and use of radioactive substances when the quantity or total activities of the substances held therein are below certain limits. Such small nuclear installations are generally governed by the legislation concerning establishments classified as dangerous, unhealthy or noxious (Act of 19th December 1917 - Decree No. 67-964 of 24th October 1967). The other difference between the two lists is that, the Decrees of 1963-1973 include, on the contrary, among large nuclear installations particle accelerators capable of giving particles an energy exceeding 300 MeV (Order of 16th September 1965) whereas the Exposé des Motifs (paragraph 9) of the Paris Convention places all accelerators outside the scope of the Convention.

I. ORIGIN AND DEVELOPMENT OF SPECIAL REGULATIONS GOVERNING NUCLEAR INSTALLATIONS UP TO 1973

Non-existence of special regulations before 1963

The publication in 1963 of special regulations in respect of construction and operation of nuclear installations may appear to have been somewhat belated in view of the fact that the first French reactor went critical in December 1948 and the Atomic Energy Commission (CEA) was instituted by Order No. 45-2563 of 18th October 1945. This Order was in fact published before the United States MacMahon Act.

This rather paradoxical situation would appear to be the result of the institutional and practical circumstances in which nuclear activities developed at that time in France. As set up in 1945, the CEA seemed in many respects a very original body as compared with the traditional form of administrative organisation. It was "very close to the Government", since it was placed under the direct authority of the Prime Minister, but at the same time enjoyed considerable freedom of action. Having been given among its tasks that of studying "measures to ensure the protection of persons and property against the destructive effects of atomic energy" and to "build nuclear power equipment on an industrial scale" a provision previously unknown to French administrative law had conferred on it, in order to carry out these tasks, the powers enjoyed by the Ministers concerned, in short the power, whenever necessary, to act in the place of the administrative authorities normally responsible. The CEA has not, it should be said, availed itself of this power, at least in the extreme form it might have taken.

Nevertheless, awareness of the high priority attached to nuclear development, as expressed by the 1945 enactments, and the fact that there was little knowledge of nuclear energy matters outside the CEA, probably explain the timidity shown during the 1950s by most of the traditional Government departments in applying the regulations in force, or adapting them to the nuclear field.

In a country governed by the rule of law, the fact that a body such as a French public undertaking is an offshoot or a means of action of the Government does not exempt it from compliance with the laws and regulations, adapted as necessary (administrative law) to take into account the fact that the work of the body concerned is recognised as serving the public interest. For example the CEA followed the procedure of compulsory acquisition of land for a public purpose in order to obtain

the necessary land to build its research centres, and that of authorisation for prospecting and mining operations. But as far as installations of an industrial character were concerned (reprocessing plants for example) the CEA could claim that it was not among the legal persons subject to the legislation most relevant to the case, namely the Act of 19th December 1917 concerning establishments classified as dangerous, unhealthy or noxious.

Since in addition, the CEA had shown great concern for the nuclear safety of its installations and the radiation protection of workers and the public, the need to adapt the regulations in force, though recognized, was not considered a matter of urgency.

In the early 1960s the obligation imposed on Member States of EURATOM (2nd February 1959) to subject certain nuclear activities to prior authorisation, the construction of large nuclear installations (power reactors, reprocessing or separation plants), in implementation of civil and military development programmes adopted as from 1955-59, and the fact that, in addition to the CEA, another public body, Electricité de France (EDF) was playing an ever-growing and increasingly independent part in such development, made it a matter of urgency to supplement legislation which approached the nuclear question from the institutional angle by regulations for administrative supervision suitably subdivided according to type of activity (large or small nuclear installations, artificial radioisotopes etc...) or to specific aspects or consequences of such activities (radiation protection, liability etc.).

This development was not limited to France, a few years earlier, probably owing to a difference in rates of industrial development and also perhaps to the gradual nature of EDF's arrival on the scene, the same change from institutional to functional legislation had been seen in the United States (Atomic Energy Act 1954) and the United Kingdom (Nuclear Installations Licensing and Insurance Act 1954).

On the other hand, in countries such as Germany which entered the field much later and left development from the start to private enterprise, legislation had to lay down from the outset the conditions for pursuit of the various nuclear activities (cf. the German and the Swiss Atomic Energy Acts of 1959 for example).

The Decree of 11th December 1963 is set out in the form of an outline enactment which determines in a precise manner only the purely administrative, procedural aspect of the scrutiny of application for authorisation to set up large nuclear installations. In this respect it has something in common with the United Kingdom Act referred to above, though it is less complete. On the other hand, this Decree differs considerably from the other Acts mentioned above, and particularly from their implementing regulations, since it makes no reference to a safety examination. It will also be noted that French law looked forward from the outset to application of the Paris Convention (2).

(2) This Convention was ratified by France on 9th March 1966 and published in Decree No. 69-154 of 6th February 1969. Furthermore, Act No. 68-943 of 30th October 1968 provides for various measures for implementing this Convention and also a transitional system pending the entry into force of the Supplementary Convention, also ratified by France, on 30th March 1966.

Layout of the 1963 Decree

Instead of issuing regulations specific to large nuclear installations, it might have been possible to adapt the system of the general law relating to dangerous or noxious industries, i.e. the so-called "classified establishments" (Act of 19th December 1917), as was done in Belgium (Act of 29th March 1958 and Royal Decree of 28th February 1963) and, in fact, in France for small nuclear installations (at present governed by Decree No. 67-964 of 24th October 1967). However, Government bodies, Universities and the CEA are not generally governed by this Act. The intention also was that the authorisation granted for large nuclear installations should be obtained prior to their being "set up", a vague term which no doubt means that such authorisation must be granted well before they are commissioned, whereas under the 1917 Act authorisation must precede "opening", i.e. operation. Last, but not least, the 1917 Act was applied at Département level, and it seemed preferable that the decision as to the desirability of granting authorisation and as to the conditions to be imposed for construction and operation, as well as supervision, should be centralised at national level, if only for considerations of the availability of competent personnel within the Administration.

The Decree of 11th December 1963 accordingly lays down the principle that the "setting up" of a large nuclear installation, by any legal person, shall be subject to prior authorisation granted by Decree. This Decree is made after an administrative investigation, including a report to the Ministers concerned, in principle a public enquiry, obtaining the opinion of an Interministerial Committee set up by the Decree and finally the concurring opinion of the Minister of Health.

The part played by administrative practice

Because of the lack of detail in the 1963 Decree the questions which it left unsettled have had to be solved by administrative practice. During almost 10 years' application of this practice it has become customary, for example, for a future operator to draw up safety reports and for these to be examined either by the internal Committees of the CEA or, in the case of nuclear power stations, by an ad hoc group of experts appointed for each power station from among the officials and specialists of the CEA and EDF. At the end of such examination these experts used to draw up the regulations included in the draft Decree. The Decree provided for only one authorisation, granted at an early stage in the implementation of the installation project, but circumstances (rapid progress of technology entailing successive amendments to the project) drew attention to the value - already acknowledged in other countries' regulations - of an administrative act granting authorisation for installations to go critical or enter into industrial service. In the case of power stations this administrative act took the form of Ministerial approval, of the main safety arrangements and general operating instructions before the installation was put into normal operation. Implicit use of the maxim "specialia generalibus derogant, generalia non specialibus" made it possible to avoid application of the 1917 Act to the various depots or installations (acids, fuel oil, for example) which although included in the list of classified establishments are within the perimeter of a large nuclear installation, and to provide in the Decree authorising construction for the making of special regulations for these depots or installations. Finally, checks on pollution of radioactive origin, which Act No. 61-842 of 2nd August 1961 and the Decree of 1963 made the responsibility of the Central Service for Protection against Ionizing Radiations (SCPRI) were to be carried out in the

light of arrangements concluded between the Minister of Health, who was responsible for the Service, and the operator. These arrangements, the validity of which was doubtful, had the merit of solving practical problems with regard to discharge of liquid or gaseous radioactive effluents (for example rules for calculating the average activity in terms of volume of effluents the discharge of which was authorised)

II. THE 1973 REFORMS

The experimental character of the 1963 Decree, and the pragmatic approach of administrative practice naturally led, after a few years' application, to consideration of improvements that might be made in the regulations. To this end, a working party set up in 1971 by the Secretary-General for Energy made a critical review of past experience and new requirements and drew up three draft Decrees.

The first, which was signed on 27th March 1973 (Decree No. 73-405) amends Decree No. 63-1228 of 11th December 1963.

The second concerned discharge of radioactive effluents. It has since been divided into two draft Decrees, one concerning liquid effluents, and the other gaseous effluents, because of the difficulty of making a single Decree consistent with the general law relating to water and to air pollution. Their signature was delayed owing to a small problem of constitutional law resulting from a provision of the Act of 16th December 1964 on water.

The third draft Decree concerns protection of workers in large nuclear installations against ionizing radiations. It was prepared in agreement with the Ministry of Labour, but signature has been delayed owing to the need to obtain the opinion of the European Commission (Article 33 of the Treaty of Rome) and various national committees, etc

In order to understand the importance of the reforms effected or planned in 1973 two factors must be taken into account. On the one hand, a trend that has been apparent since the 1950s has been confirmed, since Decrees Nos. 70-878 of 29th September 1970 and 72-1158 of 14th December 1972 give a new definition of the work and organisation of the CEA or of procedures for exercise of Government authority over that public body, to some extent bringing the CEA within the ranks of public services, although it nevertheless remains the secular arm of the State in the nuclear field. At the same time, having regard in particular to the interest now shown by the public in environmental problems, the Government felt that it must have the means to exercise its authority to issue regulations in the matter of nuclear safety, and show its independence in this respect of the public bodies specialising in nuclear affairs. Decree No. 73-278 of 13th March 1973 accordingly set up, under the authority of the Minister for Industrial and Scientific Development, firstly, a Higher Council for Nuclear Safety, as an advisory body composed of parliamentarians and other persons not members of Government departments, who should therefore be in a position to bring up matters of concern to public opinion, and secondly a Central Service for Safety of Nuclear Installations, the latter's task being to prepare technical regulations of a general character or relating to a specific installation, to follow the research work carried out in public establishments and obtain information on measures taken abroad, to organise inspections of installations and to provide a public information service.

Since the Decrees of 13th and 27th March 1973 were prepared separately, this gave rise to a problem of co-ordination which was solved by the Ministerial Decisions and Instructions of 27th March 1973. It is in these last texts, which were not published in the Official Gazette, that we find the measures taken with a view to assessment of the nuclear safety of installations, probably the essential element in any system of authorisation applicable to nuclear installations.

The main reforms introduced by this group of enactments are the following

- the Decree of 27th March makes only minor amendments in the administrative procedure for examination of applications for authorisation of construction, though this does not mean that these amendments are without practical importance. There is, for example, a concern to achieve stricter concordance between the Decree and the Paris Convention, a concern which is evident in the definition of large nuclear installations, also noteworthy is the acceptance of the concept of nuclear site, this being defined in accordance with the recommendations of the EURATOM Commission of 28th October 1965. The limitation of cases and circumstances in which a local enquiry is not compulsory, approval in principle of earlier administrative practice in respect of installations included in the list of "classified establishments", on condition that they are situated within the "perimeter of the installation" (a concept which existed in the sense of "site" in the 1963 Decree and has thus taken on a completely different meaning in that of 1973). Attention should be drawn, in this connection, to the tendency to avoid separate enquiries, the local enquiry, or, in practice, the enquiry which must precede a declaration that setting up an installation is in the public interest to which the application for authorisation for construction is subject may also replace the administrative enquiry provided for by the 1917 Act.

  This preference for the holding of a single public enquiry, covering the various aspects of the installation on which it is necessary to obtain the comments of the population concerned, should also be apparent in future decrees on radioactive effluents.

  . The respective tasks of the various supervisory bodies have been defined. It should be noted that although the supervision of radioactive effluents is to be dealt with in separate decrees, the 1973 Decree makes the officials of the SCPRI (Central Service for Protection against Ionizing Radiations) responsible for applying these regulations. This provision is not however incompatible with the tendency to separate those aspects of nuclear safety, falling within the competence of the Minister for Industrial and Scientific Development from radiation protection for which the Minister of Health or the Minister of Labour is competent.

  . It is planned to establish general technical regulations concerning the safety of nuclear installations. It is probable that in their overall conception these regulations will be similar to those relating to steam or gas pressure equipment (Act of 23rd October 1943 - Decrees of 2nd April 1926 and 18th January 1943 as amended, which were applied

to the nuclear field by the Order of 15th June 1970 concerning prestressed concrete reactor pressure vessels. These regulations endeavour to reconcile the development of technology through the wide margin of choice and responsibility allowed to constructors with regard to materials and specifications, with the laying down of provisions defining safety regulations confirmed by experience or the power to prohibit continued use of equipment that has been found to be dangerous.

- the main procedures for nuclear safety assessment were defined in the Instructions and Decisions of 27th March 1973. It is the responsibility of the Central Service for the Safety of Nuclear Installations to have the safety inspection carried out, and, in agreement with the competent Directorate of the Ministry in the case of nuclear power stations, to prepare the draft Decree for authorisation of construction and submit its provisions to the Interministerial Committee for Large Nuclear Installations.

The safety investigation is carried out by the standing Committee responsible for studying the technical aspects of the safety of nuclear installations which is competent for the particular type of installation The Decision mentioned above in fact set up three standing committees under the authority of the Central Service, the first being competent for reactors, the second for accelerators, and the third for large nuclear installations. In contrast with the earlier practice of setting up ad hoc groups to study each application for authorisation, each of these committees now comprises a fixed nucleus of members drawn from the Ministry or appointed on the proposal of the CEA (for the reactor Committee, on the proposal of EDF). However, for the examination of safety problems of a given installation the permanent nucleus is reinforced by Heads of the External Services of the Ministry, and Inspectors for the nuclear installations concerned. The files - and in particular the safety reports prepared by the operator - are transmitted to the CEA for scrutiny and presented to the relevant committee by a CEA expert acting as rapporteur.

It may be noted in this connection that although the 1970 and 1972 Decrees may be considered to reflect a certain limitation of the powers of the CEA, the Government is obliged to call widely on the services of the specialists of that body.

In the case of reactors, the same procedure is followed for examination of the reports which must be submitted before the first charge, before commissioning or, in the course of operation, before making changes in the installation or operating rules. The Instruction specifies the content of such reports.

The general rules for operation, and then the putting of the installation into normal operation, are approved by the Head of the Central Service for the Safety of Nuclear Installations.

The tendency to distinguish between nuclear safety and radiation protection, a tendency which can be clearly seen in the 1973 texts, probably as a result of the division of responsibility between the Minister for Industrial and Scientific Development and the Minister of Health, by no means excludes co-ordination in organisation. In addition to strong Ministry of Health representation on the Interministerial

Committee for Large Nuclear Installations, the Head of the SCPRI is an ex officio member of the Higher Council for Nuclear Safety and of the restricted section responsible for keeping touch with the work of the Central Service for the Safety of Nuclear Installations.

Moreover, the requirement with regard to the concurrence of the Minister of Health for publication of the decree of authorisation has been maintained, and provision made for prior contact or consultations between the Central Service for Safety and the Central Service for Protection against Ionizing Radiations during preparation of a draft Decree authorising construction or authorising discharge of wastes. The measures decided are of a pragmatic character and it is to be regretted that the drafting of these enactments did not give rise to a more precise definition of the concept of nuclear safety and its connection with the related concept of radiation protection.

CONCLUSION

The French regulations concerning authorisation of nuclear installations, as they developed in the past as well as at their present stage, provide a good example of a pragmatic, step-by-step approach to the problem. The approach is not without analogy with that of United Kingdom regulations, as opposed to the more dogmatic, structured and detailed United States and German regulations. The French regulations place the emphasis on procedures for administrative investigation, barely touching upon technical criteria for the assessment of nuclear safety. Certain measures are planned along these lines, but the aim would seem to be to fix targets rather than to impose methods or standards. In this connection, although foreign practice has already been taken into consideration, a certain difference in conception, concerning the form in which these technical provisions should be set out, seems likely to emerge in contrast with probable developments in various foreign countries, so that harmonization of such texts may also prove difficult. On other points, the French regulations do not appear to have been fully worked out, there are, for example, no specific provisions in the recent Decree of 27th March 1973 concerning problems connected with the final shutdown of nuclear installations.

ON MODERNISING THE PARIS CONVENTION

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REASONS FOR REVISING THE PARIS CONVENTION, AND OBJECTIVES

1. There are at present two reasons for exploring the possibility of updating the Paris Convention of 29th July, 1960 as amended by the Additional Protocol of 28th January, 1964. The first reason is purely formal: Article 22 (c) of the Paris Convention provides that a conference to consider revisions to the Convention be convened by the Secretary-General of the O.E.C.D. five years after its coming into force. As the Convention came into force, pursuant to Article 19 (b) thereof, on 1st April 1968, the date for holding the Revision Conference is now due. Preparations are being made by the O.E.C.D. Nuclear Energy Agency as also by the Governments of Member countries**.

The second reason is a material one, and it is sufficiently important in itself to justify holding a Revision Conference. It is in fact necessary to consider whether the Convention, as drawn up at the end of the 1950s, can still today, and in the light of foreseeable developments, provide an up-to-date system of liability law appropriate both to the nuclear risks now involved and to the economic potential of nuclear energy. This is indeed a moot question, since the use of nuclear energy for peaceful purposes has made a decisive breakthrough in recent years. Throughout the world, the network of nuclear power plants is growing and the capacity of individual generating units is increasing. The situation today is thus markedly different from what it was at the time of the signing of the Paris Convention: at that time, the idea of nuclear power plants of present-day capacities, existing in the numbers in which they now exist, was all but inconceivable. At the same time, however, and despite the continued development of safety techniques, the potential hazards have also increased. The more nuclear power plants there are, the greater becomes the statistical probability of an accident. Also, the damage resulting from an accident is likely to increase with the capacity of a reactor.

Such considerations cannot lightly be dismissed as too theoretical. Rather, they call for a rethinking of the whole question of safety with respect not only to the framing of preventive safe-guarding measures but also to the system of compensation provided by liability law. Law-makers would be ill advised not to take due account of such a transformation of the original situation, which has

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* The ideas expressed in this article are under the sole responsibility of the author.

** See page 20 (note by the Secretariat).

in turn led to an increase in the hypothetical risks involved in the use of nuclear energy. In addition, public opinion has now become more critical in matters of environmental protection, and many people's attitude towards the use of nuclear energy is one of reserve, unease or outright dissent. This should also be a motive not only for keeping constant watch on safety standards, but also for providing an up-to-date nuclear liability law corresponding to the risks involved. In view of the danger of damage being caused across national borders in geographically confined areas, above all in Western and Central Europe, an international harmonisation of laws has become a particularly urgent matter.

The following is intended as an investigation of whether the liability regime provided by the Paris Convention still works in the changed circumstances we have indicated, and whether it is able to guarantee fair compensation to the victims of nuclear incidents. The conclusions reached will, it is hoped, serve as a stimulus to the deliberations of the Revision Conference.

We need not, to be sure, expect any unduly spectacular results from this Conference. The revision of multilateral conventions is a difficult process, conducted at a number of levels, in which a compromise solution has greater chance of success than any radical overhauling, however proper and desirable many may consider this to be. A further factor in this particular case is that criticism of the provisions of the Paris Convention was first and foremost voiced in scientific writings published in Germany and in Austria. The majority of the remaining States have adopted, when they have not already formally ratified the Convention, the most important principles of treaty law through the enactment of national nuclear liability laws. In internation relations, this has led to a consolidation of the treaty law currently in force, which will be very difficult to undo. We should, however, beware of automatically concluding from this actual situation that treaty law is superior to all other nuclear liability regimes. Such a conclusion would be improper if only because no actual cases are, fortunately, known to date of treaty law having been applied with respect to third party damage. It is rather more a matter of reconsidering, with proper dispassion, the present state of affairs and of exploring where necessary, new solutions. In this, due regard should also be given in particular to the original aim of the authors of the Paris Convention, namely, that "The elaboration of a special regime for third party liability should as far as possible provide a uniform system for all Western European Countries" (1).

HIGHLIGHTS OF A REVISION OF THE PARIS CONVENTION

Under Article 3 of the Paris Convention, the operator of a nuclear installation is liable for damage caused by nuclear incidents even without proof of "fault". It is generally recognised that such "absolute" liability (according to German legal terminology "Gefahrungshaftung" , that is, "liability for endangerment") is the only form of liability which fits the risks involved. We may safely start from the assumption that this analysis will remain unaltered for the foreseeable future. Nevertheless, it is arguable whether the detailed elaboration in the Convention of the principle of absolute liability is always cogent and to the point.

(1) Expose des Motifs, paragraph 3.

Legal channelling

The principle of the sole and exclusive liability of the operator of a nuclear installation (Article 6 (a) (b) usually referred to as "legal channelling of liability" is a particularly controversial one in the Federal Republic of Germany (2) and in Austria (3). We need not dwell further on this controversy here. Even its advocates cannot however deny that it cuts an extremely unusual figure in the law of liability. The placing of liability solely on the operator of the nuclear installation and the exonderation of all other persons from any possible liabillty introduces anomalies into the legal framework of the economy. Areas of exemption in the liability law are thus granted to the supplies which are not to be found in any other branch of the economy. If, however, the principle of legal channelling has prevailed at the international level, this means that most States do not consider the dangers we have indicated as being so great as

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(2) Cf. for example, Fischerhof, Das problem einer dogmatischen Begrundung der rechtlichen Kanalisierung der Haftung auf den Betreiber enier Kernanlage, Versicherungsrecht 17 (1966), p. 601 et seq. (French version in: Broit nucleaire europeen, Paris, 1968, p.111 et seq); Kanno, Gefahrdungshaftung und rechtliche Kanalisierung im Atomrecht, Dusseldorf 1967, Klingsporn, Die Haftung fur Atomschaden, Deutsche Richterzeitung 1961, p. 109 et seq. Pelzer, Die rechtliche Kanalisierung der Haftung auf den Inhaber einer Atomanlage - ein rechtlicher und wittschaftlicher Fehlgriff? Versicherungs recht 17 (1966) p. 1010 et seq.; Pelzer, Internationale Atomshaftungs konventionen, in: Fischerhof, Deutsches Atomgesetz und Strahlenschutz recht, Volume 2, Baden Baden 1966, p.332 et seq.; Weitnauer, Die Deckung des nuklearen Risikos, Der Betrieb 1960, p. 284.

(3) Cf. in particuler Edlbacher, Bedeutet die Kanalisierung der Haftung im Atomenergierecht einen Wendepunkt? Osterreichische Juristen-Zeitung 22 (1967), p.447 et seq. (479 et seq.)

to outweigh the advantages of this legal instrument (4). Any attempt to do away with this principle at the Revision Conference is, therefore, surely doomed in advance.

By modifying the provisions of the Convention with regard to the right of recourse (Article 6 (f)) it might, however, be possible to make the channelling of liability somewhat less absolute and, hence, more likely to be acceptable to its opponents. Were the opportunities for recourse to be extended, the anomalous situation entailed by the exclusive placing of liability on the operator might to a large extent be brought back to normal. This proposal will doubtless meet with opposition from the suppliers of nuclear equipment and materials, who are favoured by the present regulations. It will, however, be necessary to consider whether or not the nuclear industry of the 1970s is in a position to abide by the same rules as those governing the rest of the economy.

The possibilities of recourse provided under Article 6 (f) can be extended in various ways without thereby completely undermining the principle of legal channelling. At present, recourse under Article 6 (f) (i) is only possible when the damage results from "an act or omission done with intent to cause damage". This formulation is so narrow that it makes such right of recourse wholly irrelevant, since it will almost never be possible to prove an intent to cause damage. Here is surely a case for extending the conditions governing the right of recourse to include damage due to gross negligence.

Moreover, it hardly appears very meaningful to limit this right to recourse against natural persons only. In view of the potential magnitude of the damage, claims against natural persons may only seldom be counted on to satisfy fully the claims of recourse. Moreover, one's sense of justice revolts against such a rule. Should the natural person "acting or omitting to act" alone be made liable, and the firm in whose service the person causing the damage had acted be exempted from all recourse claims against it? Here again, the reasonable and fair rule is the normal one, namely, that the firm, which as a rule is likely to be a legal person, is also subject to the right of recourse.

Lastly, the question might also be explored - and this would not entail amending the Convention - of providing, by means of national legislation, incentives to make regular use of the opportunity open to make contractual arrangements concerning such

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(4) Cf. also the somewhat cautious position taken by Demoures "La responsabilité de l'exploitant nucléaire au regard de la réglementation française de la responsabilite civile (Principe de canalisation), Droit nucléaire européen, Paris 1968, p. 121 et seq. Cf. also the criticisms made by Belser (Switzerland) in "Atomversicherungsrechtliche Fragen unter Berucksichtigung der internationalen Konventionen", Gottingen 1963, p. 61 et seq.

recourse [Article 6 (f) (ii)]. There is no need to amplify this further here, as there are many ways and means available to the legislature devising such incentives.

Scope of liability

Under Article 3 (a) (ii), the Convention exempts the operator of liability for "on-site damage" and damage to the means of transport upon which the nuclear substances involved were located at the time of the nuclear incident. Insofar as the provision excludes compensation for on-site damage (on his own site), it is a sensible and cogent one. Damage suffered by the operator of the nuclear installation who is at the same time the owner thereof does not constitute a case if third party liability falling within the scope of the Convention. But even when the operator liable and the owner of the installation are different persons, it seems proper to deny to the owner recourse against the operator under the Convention.

What is open to question, however, is to what extent the exemption from liability is granted. By the terms of Article 3 (a) (ii) 1 , exemption from liability extends not only to damage to the nuclear installation itself but also to damage to "any property on the site of that installation which is used or to be used in connection with that installation". This formulation leaves it unclear as to whether the property of the operator alone, or that of other third parties also is to be understood. For example, is the equipment of a firm carrying out repairs within the installation to be tacked on to the "on-site property" and thus excluded from the area of the operator's liability? There appears to be absolutely no convincing reason for such legal discrimination against the property of third parties. Moreover, such a provision can have arbitrary consequences. The Article in fact deals only with whether the non-installation property is located "on the site of that installation". In other words, a person leaving his equipment off the site will, under Article 3, be compensated in the event of a nuclear incident, while a person using his equipment on the site, even when he stands in the same legal position as the other in relation to the operator, does not receive anything. Here, a new formulation is called for to clarify this sub-paragraph.

There is a similar situation with regard to exemption from liability in cases of damage caused to the means of transport upon which the nuclear substances involved were located (Article 3 (a) (ii) 2. It is not apparent why, provided that the means of transport does not belong to the operator of the installation, such damage is not to be treated as genuine third party damage entailing an obligation on the operator to provide for compensation. The authors of the Convention clearly perceived this dilemma, since they granted the Contracting Parties un er Article 7 (c) the right not to apply the exception provided in Article 3 (a) (ii) 2, under certain given conditions. The Commission of the European Communities as also the NEA Steering Committee for Nuclear Energy have consequently seized this opportunity to recommend to Member States not to apply the exemption from liability provided in Article 3 (a) (ii) 2. (5) One of the tasks facing the Revision Conference will be to consider whether this provision cannot simply be deleted.

Finally, also paragraph (c) of Article 3 is among the provisions which call for reconsideration. Should not all damage resulting from ionizing radiations emitted by any other sources of radiation be included without exception in the area of the operator's liability under the Convention? Here again, we find a corresponding recommendation of the Commission of the European Communities (6). There are, in fact, cogent reasons for such inclusion: the legal position of the injured party is thereby considerably improved, since he is not required to concern himself with the difficult problems of proving what kind of radiation caused the damage; he need simply demonstrate that it resulted from radiation from one source or another in the nuclear installation. On the other hand, such a solution also requires that the legal policy question be settled as to whether or not it is appropriate to include all other sources of radiation in the extraordinary liability regime provided by the Paris Convention. Particular weight should be given in such considerations to the principle of legal channelling and its consequences for legal policy.

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(5) No. I, 1 of the Second Recommendation of the Commission to the Member States of 6th July 1966 (66/22/Euratom) on the harmonisation of provisions implementing the Paris Convention of 29th July 1960 (Official Journal of the European Communities 1966, page 2553).

(6) No.I, 3 of the Recommendation of the Commission to the Member States of 28th October 1965 (65/42/Euratom) on the harmonisation of provisions implementing the Paris Convention of 29th July 1960 and the Brussels Supplementary Convention of 31st January 1963 (Official Journal of the European Communities 1965, page 2995).

The territorial scope of application

Article 2 (7) provides that the Paris Convention does not apply either to nuclear incidents occurring in the territory of non-contracting States or to damage suffered in such territory. National legislation of the Member countries in whose territory the nuclear installation of the liable operator is situated can, however, provide otherwise. The Convention thereby enshrines in concrete form the strict principle of territoriality.

Inasmuch as all laws and indeed international conventions are by their nature applicable in principle only in their territorial field of application, this represents no departure from the norm. This principle is, however, to some extent restricted in legal situations which affect persons or property outside that field. In the event of damage occurring within national boundaries which has repercussions in other countries, the court before which the case is brought determines in accordance with the principles of the applicable private international law which national law applies. In this way, domestic law can also have effect beyond the borders of the legislating country. For example, should a reactor situated in a Contracting State of the Paris Convention cause damage in a non-contracting State, the court before which the injured party brought an action could, in principle, apply either the law of the Contracting State or that of the non-contracting State to the case. Here, Article 2 of the Convention introduces the anomaly, as compared with the general rules governing cases in which damage caused in one country has repercussions in other countries, of excluding the application of the provisions of the Convention (Article 2, second alternative). It provides that the injured party must be referred either to the law of the non-contracting State or to the general provisions regarding tortuous liability in the civil law of the Contracting State (for example, Art. 1384 of the French Code Civil or 823 of the German BGB . The same applies in cases where a citizen of a Contracting State suffers damage as a result of a nuclear incident occurring in a non-contracting State (Article 2, first alternative) (8).

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(7) Cf. also Article 23 (a) as also the exception to the principle of Article 2 provided in Article 6 (e).

(8) Naturally, only those cases are meant in which responsibility for the nuclear incident is to be attributed to the operator of a nuclear installation located in a territory covered by the Convention. We are here concerned first and foremost with the transport or transit of nuclear substances through non-contracting States. Cases where nuclear substances are sent to, or by, a person in the territory of a non-contracting State, are governed by the special provisions contained in Article 4 (a) (iv) and 4 (b) (iv).

The legal consequences to be drawn from this are that, with respect to nuclear incidents which occur in non-contracting States or which cause damage in their territory, the Contracting States of the Paris Convention possess no particular nuclear liability law. This results, however, in harming persons who suffer damage from such incidents: they cannot have recourse to the strict liability regime provided by the Paris Convention to protect the interest of injured parties. From the legal point of view, this is questionable on two counts.

Insofar as nationals of Contracting States lose all claims to compensation under the Convention in cases where the provisions of Article 2 are applicable, it is open to question whether such unequal treatment in relation to other nationals of Contracting States is warrantable. The principle of equal treatment of all citizens of Contracting States is explicity enshrined in Article 14 (a) of the Convention. It is, therefore for consideration whether Article 2 is not a variance with the aim and object of Article 14 (a), namely, to provide equal protection to all nationals of Contracting States. Irrespective of any provisions of the Convention, however, the equality of all citizens before the law should also be the underlying principle of government in all Contracting States. The discrimination which arises out of Article 2 is, therefore, questionable also from the point of view of current national constitutional law or current government practice.

Insofar as Article 2 excludes the right to compensation in cases of damage suffered in non-contracting States, it is open to doubt whether such a provision is admissible in international law. This doubt arises out of the potential dangers involved in the use of nuclear energy. It is a recognised principle of international law that no State may permit or tolerate activities on its territory which may possibly have harmful effects on the territories of other States (9). In view of their theoretical capability for causing damage, the operation of nuclear installations would, in principle, be considered as such an unwarrantable activity. Nevertheless, States have, up to the present day, allowed the operating of nuclear installations. A closer analysis reveals, however, that such authorisation is subject to certain conditions, and that their operation is not considered to be admissible in every case in accordance with international law. For this purpose, two conditions must in fact be met: the nuclear installations must, firstly, satisfy specific safety standards and be subject to State inspection

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(9) Cf. in particular the ruling of an American-Canadian court of arbitration in the Trail-Smelter Case (Report of International Arbitral Awards Vol. III, p. 1905 et seq.) Likewise the ruling of the International Court of Justice in the Corfu Channel Case (International Court of Justice Reports, 1949, p. 22).

and, secondly, there must be a law of liability in force tailored to the special risks involved which guarantees just compensation for damage suffered. This is illustrated particularly clearly in the treatment of nuclear merchant ships in international trade. It is no doubt still somewhat premature to suggest that these principles have already become incorporated into international customary or common law. It may, however, be asserted with all due caution that a standard practice among States is being established in this respect.

If the meaning of Article 2 of the Paris Convention is considered in this light, it is at once apparent that the exemption from liability for damage suffered in non-contracting States is incompatible with the stated principles of international law, insofar as they govern safeguards to neighbouring countries. No liability is provided by the Convention for damage suffered in non-contracting States. In relation to non-contracting States, the contracting States of the Paris Convention do not, consequently, benefit from a nuclear liability regime tailored to the risks involved such as is provided by international law.

For these reasons it would appear imperative simply to delete Article 2 (10). It will then be possible to ascertain, in accordance with the rules of private international law, whether or not the provisions of the Convention are applicable in each particular case of damage suffered outside the Convention territory.

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(10) This issue is the subject of two recommendations of the NEA Steering Committee for Nuclear Energy. Admittedly, the recommendation does not call for the complete abrogation of Article 2, but only for the inclusion of damage suffered on the high seas and in Contracting States which results from nuclear incidents occurring in non-contracting States. Such a limited enlargement of its scope of application is not, from the standpoint taken here, considered to be adequate. Cf. also Article 2 (a) (ii) of the Brussels Supplementary Convention.

The exemption from liability provided by Article 9

Article 9 of the Paris Convention exempts the operator of the nuclear installation from liability when damage can be attributed to a nuclear incident that is directly due to armed conflict, hostilities, civil war, insurrection or a grave natural disaster of an exceptional character (11).

This Article raises certain problems with regard to its drafting and its objectives.

Insofar as its wording is concerned, it is open to doubt whether the incidents which give rise to exemption from liability can be determined with sufficient clarity. While the terms "armed conflict" and "hostilities" are no doubt intended to include all forms of armed international strife, the terms "civil war" and "insurrection" are meant to designate cases of domestic strife. In the context of modern methods of armed strife, these categories are too rough to cover all cases in point. If, for example, we attempt to categorise the politically motivated terrorist acts and the taking of hostages of recent times (for example, the massacre which occurred during the 1972 Olympic Games in Munich), it becomes clear that none of the terms used in Article 9 fits, although it is the manifest aim and object of the Article to encompass such events. Similar ambiguities exist in connection with violent domestic strife, as for example student disturbances and political acts of violence. Such cases do not amount to actual insurrection or civil war, yet the situation as regards liability is a comparable one. In its present wording, therefore, Article 9 gives rise to legal uncertainties which neither the operator of the nuclear installation nor the injured party need reasonably be exposed.

It may, moreover, be questioned whether the objective of the Article is indeed a desirable one. Is the operator of a nuclear installation in fact to be exonerated from liability in the event of incidents such as those referred to in Article 9? The borderline situations outlined in the foregoing paragraph indicate that cases of damage occurring as a result of such incidents are far more likely than those due to "normal" circumstances. The eventuality of a reactor falling into the hands of extremist groups whether local or foreign, who, either from ignorance or for purposes of political blackmail, cause a nuclear incident, is today by no means a mere figment of the over-anxious jurist's imagination. A nuclear incident caused by violent means is at least as likely an eventuality as one due to air accidents, to other external causes or to technical or human failures. In such circumstances, is Article 9 to be invoked against the injured party as a possible ground for exonerating the operator from liability? An up-to-date nuclear liability law ought, rather, explicitly to include such cases also in its system of protection of victims. Otherwise the achievement of the goals set

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11. In the case of natural disasters, national legislation may provide otherwise.

forth in the Preamble to the Paris Convention will be seriously jeopardized.

Maximum amounts of liability and time limits for bringing an action for compensation

(a) The maximum amount of liability of the operator of a nuclar installation for damage caused by a nuclear incident is, according to Article 7 (b) of the Paris Convention, 15 million units of account. This amount may be lowered by national legislation to 5 million units and it may also be raised, provided that financial security is available. Together with the sums made available from public funds as provided by the regime established in the Brussels Supplementary Convention of 31st January 1963/28th January 1964, the total sum available for compensation purposes amounts to 120 million units of account (Article 3 of the Brussels Supplementary Convention). Both the maximum amount of liability of the operator and the maximum amount stipulated by the Brussels Convention require to be reconsidered.

The relative modesty of the maximum amount of liability prescribed by the Paris Convention is to be explained by the principle set forth in Article 10 that financial security must be commensurate with liability. At the time of the signing of the Convention, in 1960, it was in fact all but impossible to obtain financial security from private sector sources for a maximum amount of liability that corresponded to the risks involved. It is pointed out with good reason in the Exposé des Motifs that "Even with a limitation, it will not always be easy to find the necessary financial security to meet the risks" (12). Today, the situation is no longer the same. True, private insurance companies cannot even today provide unlimited cover. By marshalling the resources of international reinsurance and by "pooling" the risks, it is, however, possible to obtain cover for substantially greater amounts of liability than 15 million units of account. Moreover, the energy industry which operates the nuclear power plants should, at least in the highly industrialised countries, also be in a position to develop and to finance, for example by setting up a common fund, arrangements for collective financial security. Considering the financial security that is required, fifteen million units of account are today no longer a purely financial ceiling which will never be exceeded. The doubling of the maximum amount of liability to 30 million units of account would appear to be a thoroughly realistic course of action.

The raising of the maximum amount of liability is, however, not only possible for the reasons already outlined - it is also imperative. The limitation of the liability of the operator of a nuclear installation to 15 million units of account is in no way proportionate to the hypothetical risks involved in connection with nuclear installations of present-day capacities. Of "liability" in any true sense of the term there can be no question. The modest amount must rather be considered as being exceptionally favourable treatment granted with a view to promoting the nuclear industry. If

(12) Exposé des Motifs, para. 43.

we consider that the operators of nuclear installations take out insurance on property to the value of many hundred million units of account, the disparity in relation to the maximum amount of liability becomes particularly clear. This would be a difficult matter to justify to public opinion. The industry exposes itself here to the justified attacks of the opponents of the use of nuclear energy.

In this connection, the question must also be considered as to whether the maximum amount of 120 million units of account prescribed by the Brussels Supplementary Convention is still adequate. This touches upon the question of a possible revision of this Convention also (13). In the event of a major catastrophe involving a reactor, and bearing in mind the dwindling value of money in all countries, 120 million units of account is undoubtedly too small a sum to allow all persons who suffered damage to be adequately compensated. Supplementary State assistance is sure to be needed. Under these circumstances, it may be asked whether it is not more advisable to raise substantially the maximum amount in Article 3 of the Brussels Supplementary Convention.

(b) Article 8 of the Paris Convention provides that the injured party's right to compensation shall be extinguished if action for compensation is not brought within ten years. In view of the eventuality of delayed damage, ten years is surely too short a period. The extending of this period would mean a real improvement in the protection afforded to victims (14). Here again, to be sure, the problem arises as to whether financial security can be made available for such an extended period of liability. The international insurance community will have to assess for how long a period it can guarantee cover. Should it emerge that an extension of the ten-year period is beyond the means of the insurance community, it will then be necessary to explore possibilities of State-provided cover. It might then be found expedient to extend correspondingly the system of cover provided out of public funds as prescribed by the Brussels Supplementary Convention.

CONCLUSIONS

It has emerged from this account that, in a series of important points the Paris Convention no longer fully meets the

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(13) Cf. Article 16 (b) of the Brussels Supplementary Convention.

(14) National legislation may already establish a longer period than ten years, provided that measures have been taken to cover the operator's liability (Article 8 (a), second sentence).

requirements of an up-to-date nuclear liability law which corresponds to the risks involved. This does not mean that the system as a whole, together with its individual provisions, needs to be completely overhauled. It is worth noting that, in particular, the provisions governing liability for damage by transportation of nuclear substances still today win favour by their simplicity and legal elegance. It must, however, be said that on the points outlined above, the Convention needs to be brought up to date. The continued technological and economic development of the use of nuclear energy has raised new legal questions, and altered the terms of the old ones. Moreover, the magnitude of conceivable damage that can now be caused has increased. In 1960, the Paris Convention provides a progressive liability regime, which was in line with the technological and economic development of the day. Today, this is no longer the case in all respects.

To many, this may seem to be untrue, or perhaps merely exaggerated. It is, after all, the fact that very many States have already adopted the Convention, or the principles governing liability that are enshrined in it. If, however, a comparison is made of the provisions of the Convention with the nuclear liability law then in force in the Federal Republic of Germany (Sections 25 et seq. of the Atomic Energy Act of 1959) (15), it is apparent that the German legislation provides, in all but one of the points discussed here (16), better protection than the Paris Convention. To this extent, the German Atomic Energy Act may be considered superior to the Convention. Since Federal legislators must, and undoubtedly also intend, to maintain the achieved standards of protection afforded to persons suffering damage, the Federal Republic of Germany is, consequently, able to ratify the Paris Convention only with reservations. By applying to the full the reservations made by it at the time of signing the Convention, and by making use of the latitude accorded to the Contracting States, it is, in fact, possible to maintain the standards established by the Atomic Energy Act.

This may be considered the best available solution, on the grounds that the problems raised here are first and foremost problems

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(15) "Gesetz über die friedliche Verwendung der Kernenergie und den Schutzgegen ihre Gefahren (Atomgesetz)" [Act on the peaceful uses of atomic energy and protection against its hazards], of 23rd December 1959, as amended by the Act of 23rd June 1970 (Bundesgesetzblatt 1959 I, p. 814; 1970 I, p. 805).

(16) The inclusion of other sources of radiation as provided by Article 3 (c).

affecting the Germans, and do not justify a revision of the Paris Convention. Such an attitude would, however, surely be too complacent.

As a starting point, it may be assumed that all States have an interest in devising the best possible protection for their citizens in the matter of liability law. The amendments to treaty law put forward in this paper are intended to give rise to an improvement of the protection afforded to victims. It should also, however, be borne in mind that, if Germany ratifies the Convention only with certain reservations, then the harmonisation of nuclear liability law aimed for will not, for a major part of Western Europe, be achieved. An unwelcome disparity is thus created in the matter of liability law between the Contracting States. Even if an "up-dating" of the Paris Convention is not deemed to be absolutely necessary, international discussion of the question connected therewith is, nonetheless, urgently required.

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The book under review examines the question of disarmament in particular of nuclear disarmament, in connection with the general problems of international relations and is divided into two parts The first part deals with the efforts undertaken to arrive at disarmament, such as the setting up of several committees, within and outside the United Nations and the obstacles met. The second part discusses the various agreements which have resulted from the disarmament efforts. These agreements are arranged in three groups. Agreements in the first group aim at control of nuclear weapons. The second group of agreements creates denuclearised territories and the third group concerns agreements on the limitation of nuclear weapons.

The author concludes that, in spite of the considerable efforts undertaken, the results have been rather limited and that nuclear disarmament, although perhaps possible just after the Second World War, no longer has a chance of being achieved today.

• *Germany*

Gottinger Atomrechtskatalog, Banden 22, 23 and 24 Compilation of references to nuclear treaties, laws and regulations in the USA Edited by the Institut fur Volkerrecht der Universitat Gottingen, Gottingen, 1972

Before describing the contents of these new volumes, it is recalled that since 1960, the Institut fur Volkerrecht der Universitat Gottingen has been publishing regularly the Gottingen Atomrechtskatalog, a compilation of the acquisitions made by the Institute's library which is specialised in documentation on nuclear energy.

This catalogue is divided into three parts part B is a systematic Bibliography of publications, part M deals with Materials and part L with Law, regulations and treaties.

This latter part which includes the above mentioned documents gives a complete list of references, in German, English and French, of the relevant treaties, laws and regulations in the nuclear field in a large number of countries, classified in alphabetical order except for Volume No. 6 which covers the International Organisations active in the nuclear field.

The three latest Volumes (22, 23 and 24) are devoted to the United States. Volumes concerning countries are usually divided into (1) Laws and regulations, (2) Bilateral treaties, (3) Multilateral treaties , however, to take account of the constitutional structure of the United States the following plan was adopted for Federal legislation (Volume 22)

(1) Laws and Regulations

(2) Executive Orders and Reorganization Plans

(3) Regulations of the Atomic Energy Commission

(4) Other Regulations

(5) Agreements of the Atomic Energy Commission with States

(6) Interstate Co-operation

Volumes 23 and 24 list the legislation adopted by various specific States and applicable to certain aspects of nuclear energy.

Proceedings of the International Conference on Nuclear Law "Nuclear Inter Jura 1973", published by Gesellschaft fur Kernforschung mbH, Kernforschungzentrum Karlsruhe, 1973, 513 p.p.

The Association Internationale du Droit Nucléaire (AIDN) which was created in 1971 and the Gesellschaft fur Kernforschung mbH Karlsruhe organised an International Conference on Nuclear Law at the Karlsruhe Nuclear Research Centre in September 1973. Over 150 participants from 21 different countries as well as representatives of IAEA, NEA and the European Communities took part in the Conference

The Proceedings of the Conference reproduce the original texts of the 26 papers presented as well as the conclusions of the Chairmen of the 5 Working Parties set up on this occasion. These Working Parties respectively dealt with the revision of the Paris Convention on Third Party Liability in the Field of Nuclear Energy, harmonisation of licensing criteria, including aspects of environmental protection, legal problems of nuclear shipping, legal problems arising out of the Non-Proliferation Treaty, as well as the causality principle of radiation damage with special reference to social insurance systems. Also reproduced are the speeches by Professor Fischerhof, Chairman of the Association and M. Hébert the Chairman elected at the close of the Conference as well as a lecture by Professor Hafele on the role of fully developed nuclear energy in the next decade.

Proceedings of the First German Nuclear Law Symposium (1972), by Professor Dr. Rudolf Lukes. Edited by Carl Heymans Verlag, Koln, 1973, 322 p.p.

These Proceedings which are in German, comprise the papers presented at the first German Nuclear Law Symposium (Erstes Deutsches Atomrechts-Symposium) which was held on 7th and 8th December 1972 in Munster, together with a summary of the discussions following the presentation of the papers. The Symposium, whose aim was to review questions of current interest in German nuclear law, covered a wide range of subjects. They included, among other things, new developments in German nuclear law, particularly in the field of licensing and third party liability, technical and legal aspects of the siting of nuclear installations and legal problems in connection with the refitting of already licensed nuclear installations. The Symposium also examined differences and similarities between the international third party liability conventions and the German provisions in this field.

Atomgesetz mit Verordnungen. The German Atomic Energy Act and Ordinances, by Professor Hans Fischerhof. Edited by Nomos Verlagsgesellschaft, Baden-Baden, 1973, 237 p.p.

This publication issued only in German contains the texts of the German Atomic Energy Act of 23rd December 1959 and of the most important Ordinances in the nuclear field in Germany, including the Nuclear Installations Ordinance, the First and Second Radiation Protection Ordinances, the X-ray Ordinance, the Financial Security Ordinance, the Ordinance concerning Costs under the Atomic Energy Act, the Food Irradiation Ordinance and the Ordinance on the Authorising of Medicaments treated with Ionizing Radiation or containing Radioactive Substances

• *Italy*

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This publication on the legal regime governing the peaceful applications of nuclear energy, reproduces in Italian the texts of the most important Acts and Decrees on nuclear activities in Italy. It is intended to facilitate the study of legal provisions in the nuclear field, particularly those covering nuclear safety, radiation protection, licensing procedures and third party liability.

• *United States*

The Safety of Nuclear Power Reactors (Light Water-Cooled) and Related Facilities. Wash-1250, published by the United States Atomic Energy Commission, July 1973

This report on the safety of nuclear power reactors (light water-cooled) and related facilities was prepared by the staff of the Atomic Energy Commission in response to a request of the Chairman of the Congressional Joint Committee on Atomic Energy. Although this is not a publication of a legal nature, it is of direct interest to persons working in nuclear law. In addition to information on the technical aspects of nuclear power reactor safety, the report gives detailed information on the basic philosophy for assuring the safety of such installations as well as on the present progress in the use of nuclear power in the United States. It also sets out the Government's authority and responsibility in the regulation of the safety of nuclear installations. The Regulations in force in this field, enacted by the Atomic Energy Commission, are also reproduced in this report.

• *IAEA*

Experience and Trends in Nuclear Law A selection of papers presented at the Seminar on the development of nuclear law in Bangkok and the Inter-regional training course on the legal aspects of nuclear energy in Athens. Edited by the IAEA, Vienna, 1972, 169 p.p.

The papers assembled in this publication cover a variety of subjects of interest in the field of nuclear law and are intended to reflect both experience in the development of nuclear legislation at a national level and trends in an international approach to legal issues raised by the expanding use of nuclear energy.

The book consists of five sections each representing an area of nuclear law. The first section deals with nuclear safety and environmental protection and furnishes information on the legal status and implementation of IAEA safety standards, the structure and responsibilities of the Spanish Junta de Energia Nuclear, and on recent developments in the field of radiation control and environmental protection in the United States. Section II reviews the international supply of nuclear materials and the procedures for supply of nuclear materials through IAEA. The third section covers the different aspects of nuclear third party liability and its implementation in OECD countries and the practical problems in nuclear insurance, while Section IV outlines the

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This publication is divided into three parts. The first part lists chronologically all agreements registered with the Agency up to 31st December 1971; these agreements have been given registration numbers corresponding to the dates of their entry into force. The second part lists the agreements registered with the Agency between 1st January 1972 and 30th June 1973. The third part consists of a tabular presentation of the material contained in Part I, setting out the States having concluded these agreements. This presentation groups the agreements under a number of main headings, also giving the relevant Agency registration number. The registration of agreements is undertaken pursuant to Article XXII.B. of the Agency's Statute. This Article provides that agreements between the Agency and any member and agreements between the Agency and any organisation shall be registered with the Agency. In accordance with the Agency's Regulations for the Registration of Agreements the Director General must inform the Member States and the Secretary General of the United Nations of all agreements registered with the Agency. This publication is intended to comply with this requirement.

• *WHO*

Protection against ionizing radiation. Survey of laws and regulations in force, published by WHO, 1972, 353 p.p.

This study analyses legislation and regulations applicable in a certain number of countries and follows and updates the study published in 1964 by the World Health Organisation.

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The analyses of national laws are supplemented by a list of bibliographic references as well as legal texts mentioned therein The Study covers the following countries

Australia	Netherlands
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It should be recalled on this occasion that the World Health Organisation publishes each quarter two separate English and French editions of an International Digest of Health Legislation which provides the texts or summaries of health laws and regulations, also in the radiation protection field.

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