

NUCLEAR
LAW
Bulletin
number 25

Contents

<i>Legislative and Regulatory Activities</i>	6
<hr/>	
<i>Case Law</i>	28
<hr/>	
<i>International Organisations and Agreements</i>	32
<hr/>	
<i>Texts</i>	44
<hr/>	
<i>Studies and Articles</i>	57
<hr/>	
<i>Bibliography</i>	80
<hr/>	

Nuclear Energy Agency

Organisation for Economic Co-operation and Development

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

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

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

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

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

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

This is achieved by

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

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

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FOREWORD

The readership of the Nuclear Law Bulletin continues to expand with each issue, and it is now distributed all over the world. The volume of information treated has also increased in parallel and, so as to facilitate research and consultation of the analyses and texts published in the Bulletin since its inception, a new Index has been prepared which covers the first twenty-five issues.

The NEA Secretariat wishes to take this opportunity to thank all those whose kind assistance has enabled us to publish this Bulletin.

LIST OF CORRESPONDENTS TO THE NUCLEAR LAW BULLETIN

- ARGENTINA - Mr. MARTINEZ FAVINI, Head of Legal Department, National Atomic Energy Commission
- AUSTRALIA - Office of External Relations, Australian Atomic Energy Commission
- AUSTRIA - Dr. STEINWENDER, Director at the Federal Chancellery
- BELGIUM - Mr. STALLAERT, Social Security Administration, Ministry of Employment and Labour
- Mr. DE SMEDT, Legal Counsellor, Ministry of Economic Affairs
- BRAZIL - Mrs. C. DO AMARAL LINHARES GOMES LEITE, Legal Adviser, Comissao Nacional de Energia Nuclear
- CANADA - Mr. MacISAAC, Director, Legal Services, Atomic Energy Control Board
- DENMARK - Mr. MELCHIOR, Head of Division, Ministry of Justice
- FINLAND - Mr. SAHRAKORPI, Legal Adviser, Ministry of Trade and Industry
- FRANCE - Atomic Energy Commission
- GERMANY (Federal Republic) - The Institute of Public International Law of Göttingen University, Department of Nuclear Law (Dr. PELZER)
- GHANA - Mr. LEBRECHT HESSE, State Attorney, Ministry of Justice
- GREECE - External Relations Office, Greek Atomic Energy Commission
- INDONESIA - Mrs. SOEPRAPTO, Head of Legal Division, National Atomic Energy Agency
- IRELAND - Mr. SWEETMAN, Barrister-at-Law, Dublin
- Department of Transport and Power
- ISRAEL - Mr. NATIV, Legal Adviser of the Israeli Atomic Energy Commission
- ITALY - Mr. MARCHETTI, President of Session, Supreme Court
- Dr. NOCERA, National Committee for Nuclear Energy, Central Directorate for Nuclear Safety and Health Protection, Legal Section
- JAPAN - The Head of the Policy Division, Atomic Energy Bureau, Science and Technology Agency (Mr. MIYAMOTO)
- Mr. SHIMOYAMA, Deputy Manager of Financial and Purchasing Department, Japan Atomic Power Company

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

LEGISLATIVE AND REGULATORY ACTIVITIES

• *Australia*

ENVIRONMENTAL PROTECTION

The Nuclear Activities Regulation Act, 1978 (Western Australia)

Act No. 104 of 30th November 1978 provides for the regulation and control of nuclear activities as well as for the formulation and adoption of codes of practice governing these activities. This Act was made in implementation of the Environment Protection (Nuclear Codes) Act 1978 (see Nuclear Law Bulletin No. 23), the purpose of which is to make provision for protecting the health and safety of the population and the environment against the possible harmful effects of nuclear activities.

• *Brazil*

REGIME OF NUCLEAR INSTALLATIONS

1979 Resolution of the National Nuclear Energy Commission establishing general criteria for nuclear fuel reprocessing plant projects

Resolution No. 3-A/79 of 23rd January 1979 was made by the National Nuclear Energy Commission in accordance with its powers under Act No. 6.189 of 16th December 1974 (see Nuclear Law Bulletin No. 23), and published in the Official Gazette of June 1979, Section I, Part II. The Resolution lays down the general technical safety criteria to be complied with in the planning, construction, operation and decommissioning of nuclear fuel reprocessing plants, in accordance with the regulation in force.

1979 Resolution of the National Nuclear Energy Commission on the
licensing of nuclear reactor operators

Resolution No. 12/79 of 26th September 1979 was made by the National Nuclear Energy Commission in accordance with its powers under Act No. 6,189 mentioned above, and published in the Official Gazette of October 1979, Section I, Part II. The purpose of the Resolution is to lay down the licensing requirements for technicians in charge of reactor operations and control of equipment connected with nuclear reactors licensed in accordance with the regulations in force.

• *Canada*

REGIME OF NUCLEAR INSTALLATIONS

AECEB 1980 Policy on public access to licensing information

The Atomic Energy Control Board of Canada (AECEB) implemented on 1st May 1980 a new policy on public access to information relating to the nuclear licensing process. According to this policy, AECEB will make available for examination by the public all licences and approvals issued pursuant to the Atomic Energy Control Regulations and all related documents. The Board will also provide information on any action it takes to revoke or suspend any licence or approval, a summary of any hearing held, and its final reasoned decision.

Any notice of intent to establish an uranium or thorium mine, a nuclear reactor, a spent fuel reprocessing plant, an uranium enrichment plant or a heavy water plant will be communicated to the public, as will written reports submitted by AECEB licencees concerning any occurrence. If the AECEB considers that there is an actual or potential existence of a hazard to the public or the environment in activities within its areas of responsibility, the public will be informed accordingly.

Information on certain activities is exempted from disclosure according to this policy on the basis of a number of criteria, in particular, information to be treated confidentially pursuant to international commitments, or that which, if disclosed, might jeopardize security precautions and finally, commercial or proprietary information.

• Denmark

RADIATION PROTECTION

Orders of 1977 and 1978 made in implementation of Order No. 56 of 17th February 1977 on the use of X-ray installations etc.

Order No. 493 of 8th September 1977

This Order on dental X-ray equipment for intraoral radiography (published in the Danish Official Gazette of 29th September 1977) was made by the National Health Service under Order No. 56 mentioned above (see Nuclear Law Bulletin No. 22). It applies to equipment not exceeding 70 kV and deals with the radiation protection of patients, guidelines for the medical personnel concerned, notification and approval procedures, the technical specifications to be complied with and the different responsibilities of those concerned. The Order also makes provision for inspection of such equipment by the National Health Service.

Order No. 58 of 20th February 1978

This Order on X-ray equipment for educational purposes (published in the Danish Official Gazette of 28th February 1978) was made by the National Health Service and lays down the measures to be complied with when using such equipment.

Order No. 59 of 20th February 1978

This Order on medical equipment for superficial radiotherapy (published in the Danish Official Gazette of 28th February 1978) was made by the National Health Service. It applies to equipment using voltages not exceeding 50 kV and deals with the radiation protection of patients, dose measurement of the equipment, notification and approval procedures, the technical specifications to be complied with and the different responsibilities of those concerned. The Order also prescribes that the equipment must be inspected annually by an undertaking licensed by the National Health Service; provision is also made for inspection by the latter at least once every five years.

Order No. 60 of 20th February 1978

This Order on medical equipment for deep radiotherapy (published in the Danish Official Gazette of 28th February 1978) was made by the National Health Service and applies to equipment using voltages between 50 and 400 kV. It contains provisions similar to those of Order No. 59 described above.

REGIME OF NUCLEAR INSTALLATIONS

Act of 25th February 1976 on Electricity Supply

Act No. 54 on Electricity Supply provides the basic framework for electricity supply from all sources of energy, including nuclear energy. It lays down that all electricity generating plants must be planned with regard to the total power production network in Denmark. Under the Act, nuclear power plants are subject to prior authorisation by the Minister of Energy with the concurrence of the Energy Policy Committee, namely after parliamentary approval.

REGIME OF RADIOACTIVE MATERIALS

Regulations of 7th July 1978 on radioactive medical products

The above Regulations of 7th July 1978 were published in the Danish Official Gazette No. 356 on the same date. They lay down the licensing system for radioactive medical products and list in Annex the radionuclides contained in medical products subject to licensing by the appropriate authorities, namely the National Health Service.

TRANSPORT OF RADIOACTIVE MATERIALS

Circular of 16th June 1976 on the transport of radioactive materials

This Circular was issued by the State Institute of Radiation Hygiene under the Order of 20th November 1975 on the Safe Use of Radioactive Substances (see Nuclear Law Bulletin No. 17).

The Circular lays down the licensing requirements for the transport of radioactive materials and specifies that licences for such transport must be obtained from the National Health Service, in practice the Institute which is the competent authority for all questions involving radioactive materials.

• *France*

ORGANISATION AND STRUCTURE

Decree of 3rd April 1980 relating to study and research in thermonuclear fusion by inertial confinement

Decree No. 80-247 of 3rd April 1980 (Official Gazette of 6th April 1980) lays down the procedure to be followed by institutes

or persons engaging in study and research in thermonuclear fusion by inertial confinement. The purpose of the Decree is to put these activities under State control so as to ensure that any information, documents or processes resulting therefrom are not used in a manner harmful to the national security.

Activities in this field are subject to prior notification to the General Secretariat for National Defence. Such studies and research which benefit from State support or financing may only be undertaken following prior authorisation by the Prime Minister.

To this effect, the Decree provides for the setting up of a Committee responsible for controlling such activities. This Committee is charged with preparing administrative decisions relating to the control of study and research in thermonuclear fusion by inertial confinement, and advises the Prime Minister concerning the prior authorisation required under the Decree.

The provisions of this Decree do not apply to the work connected with the uses of atomic energy in relation to national defence carried out by the Atomic Energy Commission (CEA).

REGIME OF RADIOACTIVE MATERIALS

Decree of 11th March 1980 on mining rights

Decree No. 80-204 (published in the Official Gazette of 16th March 1980) repeals a Decree of 29th October 1970 on the same subject. However, it does not amend the Mining Code presently in force, which contains provisions of substance governing mining research and exploitation.

In connection with substances of use for atomic energy, any projects for taking out, modifying or suppressing mining rights must, as in the past, be submitted to the Committee for Atomic Energy before the file is forwarded to the General Council for Mines. It is now laid down that the Committee for Atomic Energy must take its decision within one month. The previous text contained no provision concerning a time-limit in this respect.

ENVIRONMENTAL PROTECTION

National regulations relating to radioactive waste*

1. Regulations specified to radioactive waste

French regulations specific to radioactive waste are still in their infancy. Reference may be made to:

- (a) Regulations governing installations classified for the purposes of environmental protection

Items Nos. 385 ter (transformation and conditioning of radioactive substances) and 385 quinquies (depositing or storing radioactive

* The term "radioactive waste" is used in a narrow sense, i.e. solid or solidified waste and therefore does not apply to liquid or gaseous effluents released to the environment after treatment, or stored for an interim period.

substances) in the list of establishments classified for the purposes of environmental protection (Act of 19th July, 1976, see Nuclear Law Bulletin No. 18) can be applied to radioactive wastes, but in their case the standard Prefectoral Orders concerning installations to be declared merely stipulate that,

"radioactive residues shall be stored in conditions of absolute safety" and that "receptacles containing residues shall be marked on the outside, in very legible, indelible and fire-resistant characters, with the names of the products in them, the date of storage and the activity in curies on that date".

(b) Regulations governing large nuclear installations

Section 2 of Decree No. 63-1228 of 11th December 1963 includes under large nuclear installations requiring authorisation:

- plants for transforming radioactive substances (including radioactive waste processing plants), and
- installations for storing or depositing radioactive substances (including waste).

The following enabling Decrees were issued in implementation of this provision:

- Decree of 19th June, 1969 - storage at La Hague
- Decree of 14th June, 1971 - storage at Saclay, Fontenay-aux-Roses and Saint-Laurent-des-Eaux
- Decree of 20th December, 1972 - storage at Grenoble
- Decree of 9th August, 1978 - construction of a facility for pre-treating highly enriched uranium wastes at Romans (FBFC plant).

(c) Control of pollution of the sea

Act No. 64-1245 of 16th December, 1964 prohibits the sea dumping of radioactive waste without Prefectoral authority. It is of course applicable only within territorial waters.

In addition the Order of 19th April, 1972 instructs the Ministry of Industry to ensure the necessary co-ordination, in liaison with the Ministries of Defence, of the Environment and the Quality of Life, of the Interior and of Agriculture, for taking and analysing samples of water in order to look for radioactive waste from nuclear plants in the context of detecting radioactive pollution.

In fact the aim here seems rather to be to monitor the effluents from these plants.

(d) Protection of workers

In Decree No. 67-228 of 15th March, 1967 only one Section deals with waste, namely Section 49, according to which "radioactive waste or residues shall be collected in special containers for treatment and disposal".

Section 50 adds that only paper handkerchiefs (supplied by the employer) are allowed inside premises where unsealed sources of radioactive substances are prepared or utilised. These handkerchiefs are

placed after use or at the end of each work shift in a suitable receptacle kept for that purpose at the place of work. This receptacle must be emptied daily and the handkerchiefs must be regarded as radioactive waste.

Decree No. 75-306 of 28th April 1975 concerning the protection of workers in large nuclear installations merely requires overall accounts to be kept for radioactive waste (Section 10). These accounts must be made available for inspection by officers of the Central Service for Protection against Ionizing Radiation (SCPRI).

In addition, Section 40 of this Decree provides that Orders may be issued prescribing technical measures in connection with the movement and provisional storage of solid radioactive waste and the sites for storing it.

So far the only Order issued under this Section is the Order of 11th October 1977 prescribing various general safety measures for radioactive waste. Section 3 of the Order requires the containers for collecting solid waste and the sacks for transporting contaminated clothing to be handled and marked conspicuously so as to limit the exposure of workers.

The works manager must take all necessary steps to group together the waste according to its nature and activity and must keep a record for the SCPRI.

(e) Disposal of waste from industrial establishments and hospitals

A notice published in the French Official Gazette of 6th June 1970 contained recommendations for users of various radioisotopes concerning disposal of radioactive waste in unsealed sources. These recommendations do not have mandatory force.

(f) Role of the Secretary-General of the Interministerial Committee for Nuclear Safety

According to Decree No. 75-713 of 4th August 1975 (see Nuclear Law Bulletin No. 16), the Secretary-General of the Interministerial Committee for Nuclear Safety is responsible for the control and safety of waste during its production, storage and transport with a view to protecting public health.

(g) Role of the National Radioactive Waste Management Agency (ANDRA)

This Agency was set up within the Commissariat à l'Energie Atomique by an Order of 7th November 1979 for long-term radioactive waste management in line with the general policy laid down by the Government, i.e. in fact (as we have just seen) by the Secretary-General of the Interministerial Committee for Nuclear Safety (see Nuclear Law Bulletin No. 24).

2. Additional regulations of a general nature

(a) Basically these regulations are a result of Act No. 75-633 of 15th July 1975 on waste disposal and recovery of materials, and of its implementing Decrees. They are therefore recent regulations and are still very incomplete.

The Act includes the following provisions:

- Section 8 requires enterprises producing, importing, transporting or disposing of waste liable to cause disutilities to provide the Government with full particulars concerning the origin, nature, characteristics, quantities, destination and method of disposing of the waste they produce, pass on to third parties or for which they assume responsibility. For example, these enterprises may be required to keep a register, make periodical returns or, as regards the transport of waste, make out a declaration of loading (Decree No. 77-974 of 19th August 1977).

These rules are applicable to waste containing radioactive substances.

- Section 9 of the Act authorises the Government to regulate the conditions for carrying out these activities and make the operation of processing plants subject to a licensing procedure. This procedure already exists for large nuclear installations.
- Section 24 prescribes a number of penalties and Section 26 lists the officials authorised to report offences.

(b) Protection of underground waters

France already has a large body of regulations for protecting the quality and quantity of underground waters, especially those used for human consumption.

As the construction and subsequent management of an underground dump of radioactive or other waste may have a direct or indirect influence on the quality and quantity of underground water resources, some regulations are intended to control the dumping of any kind of polluting matter underground. The following may be mentioned:

- Section 40 of Act No. 64-1245 of 16th December, 1964
- Decrees Nos. 73-218 and 219 of 23rd February, 1973
- Section 8 of the Order of 20th November, 1979
- the Circular of 2nd September, 1973
- the Circular of 14th January, 1977.

(c) Exploitation of the continental shelf

If dumping of radioactive waste in the sea bed is engineered it must not hinder the exploitation of natural resources in the continental shelf, which is regulated by the Geneva Convention of 29th April, 1968 and by Act No. 68-1181 of 30th December, 1968.

The exploitation of natural resources under the sea is governed by the Mining Code, or where appropriate by Act No. 76-646 of 16th July, 1976 relating to prospection, exploration and exploitation of mineral substances outside the scope of Section 2 of the Mining Code and present in the territorial sea bed.

(d) Application of mining regulations

Mining regulations are not normally applicable to the creation of a facility for radioactive waste disposal in deep geological formations, because this operation has no connection with exploration and exploitation of mineral or fossil substances.

However, some provisions of the Mining Code have a very wide scope, such as Section 131 of the Code, which requires that any person making a boring, constructing a facility underground or excavating, for whatever purpose, should notify the Interdepartment Director of Industry accordingly. The same applies to surveys for taking geophysical measurements and to geochemical prospecting (Section 133 of the Mining Code).

Any information of any kind obtained in the course of such work must be reported to the Government (Sections 132 and 134).

3. Principal competent authorities

Apart from the Secretaries-General of the Interministerial Committee for Nuclear Safety and of the ANDRA already mentioned, numerous central or local authorities are involved in the problem of radioactive waste management.

First, the following authorities, in addition to those of the Commissariat à l'Energie Atomique and its subsidiary companies, play a direct part in the management of ANDRA:

- for the Ministry of Industry: the Director-General of Energy and Raw Materials and the Director-General of Electricité de France;
- for the Ministry of Health: a representative of the hospitals which produce waste;
- for the Ministry of the Environment and the Quality of Life: the Director of the National Agency for Waste Recovery and Disposal.

(a) At governmental level

The following Ministers are directly concerned:

- the Minister of the Environment and the Quality of Life,
- the Minister of Industry;
- the Minister of the Interior;
- the Minister of Health;
- the Minister of Transport;
- the Minister of Agriculture;
- the Minister of the Budget;
- the Minister of Justice.

Consequently there is a need for co-ordinating authorities and in fact there are several of these:

- the Prime Minister himself, with the support of the Inter-ministerial Committee for the Quality of Life (Decree No. 78-243 of 6th March, 1978);
- the Minister of the Environment and the Quality of Life (Decree No. 75-310 of 23rd April, 1975);
- the Secretary-General of the Interministerial Committee for Nuclear Safety mentioned above (for radioactive waste).

In addition, each Minister is of course assisted not only by the official departments under him, but also by various advisory committees and specialised public establishments. For example:

- the Minister of Industry is assisted by the Directorate of Industrial Quality and Safety (which controls the Central Service for the Safety of Nuclear Installations - SCSIN), by the General Council for Mines, by the Interdepartment Directorates for Industry and by the Committee for the Safety of Underground Storage (Order of 26th June, 1979). Mention may also be made of the Commission on Standards and of the Innovation and Technology Board;
- the Minister of Health is assisted by the SCPRI, the High Council for Public Health and the Departmental Health Councils, as well as by the General Directorate for Health (Sub-directorate for prevention and detection operations);
- the Minister of the Environment and the Quality of Life is assisted by the National Agency for Waste Recovery and Disposal, the Interministerial Co-ordinating Committee for Waste Disposal, the High Committee for the Environment, the National Council for the Protection of Nature, the Central Board for Natural Sites and Landscapes, and so on.

The administrative departments under him include the Directorate for the Prevention of Pollution, the Directorate of Town Planning and Landscapes, the Agency for the Quality of Life, the Directorate for Economic and International Affairs, the Department of Study and Research, and so on.

In addition, a Secretary of State with special responsibility for environmental questions has been attached to the Minister.

Other public establishments, whether autonomous or attached to the Prime Minister are also concerned with the question, in particular the Agency responsible for town and regional planning (which now controls the Directorate for the protection of coastal and lacustrian areas) and the General Planning Commission.

(b) At "département" or local level

Clearly, officials at "département" level (Prefect and General Counsellor) and those at communal level (Mayor and Municipal Counsellor) who are concerned by the siting of a facility for radioactive waste treatment or storage cannot be excluded from this list.

In addition, when several communes are concerned at the same time, the Act of 15th July, 1975, provides that they may set up inter-communal groups: inter-communal consultations and conferences, commune and district unions, joint unions etc. (see Commune Code, book I, chapter VI). Regional public establishments may also be set up.

(c) Representatives of the public

Provision is generally made for representatives of the public in co-ordinating bodies.

- specialists (on a personal basis);
- associations for protection of the environment,
- industrial and agricultural organisations (waste-producing activities);
- organisations specialising in elimination and recovery.

• *Federal Republic of Germany*

RADIATION PROTECTION

1979 Ordinance to amend the Second and the Third Ordinances on the adjustment of apparatus for measurements

The Ordinance of 21st December 1979 (Bundesgesetzblatt 1979, I, p.2347) prescribes that certain types of radiation measurement systems and dosimeters must be modified.

TRANSPORT OF RADIOACTIVE MATERIALS

1979 Ordinance on the transport of dangerous goods by rail

The Ordinance of 23rd August 1979 on the transport of dangerous goods by rail (Bundesgesetzblatt 1979, I, p.1502) provides for new regulations on the carriage of such goods, including radioactive substances. It came into force on 1st September 1979.

1979 Ordinance on the transport of dangerous goods by road

The Ordinance of 23rd August 1979 on the transport of dangerous goods by road (Bundesgesetzblatt 1979, I, p.1509) provides for new regulations on the carriage of such goods, including radioactive substances. This Ordinance, which came into force on 1st September 1979, repealed a similar Ordinance of 28th September 1976 and amended Section 9 of the Radiation Protection Ordinance of 13th October 1976 (see Nuclear Law Bulletin Nos. 16, 18 and 19).

1979 Ordinance to amend the Regulations on the transport of dangerous goods on the Rhine (ADNR)

The 1971 Regulations on the transport of dangerous goods on the Rhine (see Nuclear Law Bulletin No. 9) were amended by the Third ADNR Amendment Ordinance of 18th July 1979 (Bundesgesetzblatt 1979, I, p.1119).

ENVIRONMENTAL PROTECTION

Waste management and reprocessing of nuclear fuels from nuclear power plants (Entsorgung)*

The Federal Minister of the Interior has published "Principles on precautions for waste management and reprocessing of nuclear fuels from nuclear power plants" (Bundesanzeiger No. 58, 22nd March 1980, p.2). In order to implement the Resolution of the Heads of Government of the Bund and the Lander concerning the "Entsorgung" of Nuclear Power Plants of 28th September 1979 (see Nuclear Law Bulletin No. 24), the Joint Committee of the Bund and the Lander on Nuclear Energy agreed on these new Principles on 29th February 1980. The Principles are not mandatory for the operators of nuclear power plants directly, but are binding directives for the licensing authorities in the framework of the licensing procedure. Though the "Entsorgungsvorsorge" is not a formal prerequisite for a nuclear plant licence, the Principles are nevertheless, de facto, of decisive importance for the granting of a licence.

Act of 28th March 1980 concerning criminal acts against the environment

As already announced in Nuclear Law Bulletin No. 23, a Bill concerning criminal acts against the environment was submitted to the Federal Parliament. On 28th March 1980, it adopted the 18th Act Amending the Penal Code - Act on the combating of criminal acts against the environment (Achtzehntes Strafrechtsänderungsgesetz - Gesetz zur Bekämpfung der Umweltkriminalität). The Act was published in the Federal Gazette (Bundesgesetzblatt), Part I, p.373, of 3rd April 1980, it will enter into force on 1st July 1980.

It is the purpose of the Act to improve environmental protection by deleting penal provisions (except statutory offences) from various Acts applicable in this field and integrating them into the Penal Code (Strafgesetzbuch). In addition, certain of these provisions were modified and new ones added.

As regards the Atomic Energy Act (reproduced in the Supplements to Nuclear Law Bulletin Nos. 15 and 18), the penal provisions of Sections 40 to 44, 51 and 52 were already repealed in 1974 and mostly incorporated in the Penal Code (Sections 310b to 311c). The new Act of 28th March 1980 repeals Sections 45, 47, 48 and 50 and amends Sections 46 and 49. Chapter V of the Atomic Energy Act now reads as follows

* "Entsorgung" means the adequate and safe transfer of all irradiated fuel elements resulting from the entire operation of the installation to a storage installation suitable for that purpose, with the aim of utilising such fuel elements by reprocessing them or by conditioning them for disposal without reprocessing, as well as the treatment and disposal of radioactive wastes produced by such operations.

- A new No. 2 has been added to sub-section 1 of Section 46 (Statutory Offences):
- 2. "constructs installations for the protection or treatment or fission of nuclear fuel or for the reprocessing of irradiated nuclear fuel, without having obtained the licence required under Section 7, sub-section 1 or 5,"
- Nos. 2, 3 and 4 of sub-section 1 of Section 46 have been respectively renumbered 3, 4 and 5
- Sub-section (2) of Section 46 has been amended as follows
- (2) "The statutory offence shall be punishable with a fine of up to DM one hundred thousand in the cases given in 1 to 4 in no. 5 of sub-section 1."
- Section 49 (Confiscation) has been amended as follows
- "Where an offence punishable under Section 46, sub-section 1 nos. 1 to 4, has been committed wilfully, objects may be confiscated which
- 1. relate to the offence or
- 2. were used or intended for the preparation or commission of such act."

● Italy

ORGANISATION AND STRUCTURE

Decree of 19th April 1979 setting up an Interministerial Committee on physical protection of nuclear material

This Decree by the Ministry of Industry, Commerce and Crafts sets up an Interministerial Advisory Committee on the physical protection of nuclear material for a period of four years: 1st April 1979 to 31st March 1983.

Since 1976, the Ministry had recommended that nuclear operators should adopt physical protection measures in accordance with the International Atomic Energy Agency's (IAEA) recommendations on physical protection of nuclear material contained in document INFCIRC 225/Rev.1 Accordingly, the Committee's tasks are to set the criteria required for the physical protection of nuclear materials and plants against criminal acts; and also to examine and advise on any defense plans with this object, prepared by nuclear operators for their own installations and materials.

• *Japan*

RADIATION PROTECTION

1980 Amendments to the 1957 Law on Prevention of Radiation Hazards

On 25th April 1980 the Diet (Parliament) approved a series of amendments to Law No. 167 of 10th June 1957 on Prevention of Radiation Hazards due to Radioisotopes, etc. This Law concerns the processing, sale and disposal of radioisotopes and radiation-generating apparatus.

The amendments cover, inter alia, the introduction of a system for approval and inspection of radioisotopic equipment, mandatory training courses for senior technical personnel and the setting up of a body to conduct the courses.

The Law was also amended to enable compliance at domestic level of the provisions concerning radioactive waste disposal laid down by the London Convention on the Prevention of Marine Pollution by Dumping of Wastes and other matter approved by the Diet.

REGIME OF NUCLEAR INSTALLATIONS

1980 Amendment of the 1957 Regulation Law

On 25th April 1980 the Diet also approved the amendment of Law No. 166 of 10th June 1957 for the Regulation of Nuclear Source Materials, Nuclear Fuel Material and Reactors, the so-called Regulation Law (see Nuclear Law Bulletin No. 24).

The Law was amended to take account of adoption by Japan of the London Convention (see above). The amendments concern in particular the special permits operators must obtain from the authorities to enable them to dump certain radioactive wastes into the sea.

• *Norway*

RADIATION PROTECTION

1979 Royal Decree concerning the qualifications required to use X-ray devices for medical purposes

The Royal Decree of 2nd November 1979 lays down regulations which prescribe the qualifications needed to use X-ray devices for medical purposes. The State Institute of Radiation Hygiene is the competent authority under the Decree. These regulations were made pursuant to Act No. 1 of 18th June 1938 on the use of X-rays and radium and entered into force on 1st January 1980.

• *Spain*

ORGANISATION AND STRUCTURE

Royal Decree of 7th December 1979 on the reorganisation of activities in the nuclear fuel cycle

Within the framework of the national energy plan, and for the purpose of ensuring the supply of uranium for nuclear power plants in Spain, Royal Decree No. 2967 of 7th December 1979 (Official Gazette No. 12 of 14th January 1980), reorganises and develops the duties and responsibilities of the National Uranium Undertaking (ENUSA) set up by Decree No. 3322 of 23rd December 1971 (see Nuclear Law Bulletin No 9). ENUSA is a public undertaking, wholly controlled by the State, with a majority capital held by the National Institute for Industry and participation by the Junta de Energia Nuclear, which advises it in connection with research and development. ENUSA is responsible for the development of industrial and commercial activities related to the nuclear fuel cycle.

For the purposes of this Decree, the activities in nuclear fuel cycle include:

- Prospection for research and exploitation of radioactive ore deposits, including the treatment of such ores to obtain uranium and thorium concentrates;
- Conversion of uranium concentrates into uranium hexafluoride,
- Uranium enrichment;
- Manufacture of fuel elements for nuclear power plants,

- Irradiated fuel reprocessing, and
- Final storage of radioactive waste.

While the Junta de Energia Nuclear remains responsible for final storage of radioactive waste, ENUSA is henceforth in charge of the other above-mentioned activities in execution of the national plan for prospection for and investigation of uranium. Its duties also include the constitution and management of a basic reserve of natural and enriched uranium, in quantities and conditions determined by the Minister of Industry and Energy in accordance with the national energy plan.

The Minister of Industry and Energy will establish additional regulations as appropriate in implementation of the Decree, in particular for the transfer of the duties connected with the nuclear fuel cycle presently assigned to the Junta de Energia Nuclear.

Order of 28th March 1980 on the transfer to ENUSA of the duties of the Junta de Energia Nuclear connected with the nuclear fuel cycle

In implementation of the Royal Decree of 7th December 1979 (see above), the Minister of Industry and Energy made the Order of 28th March 1980 (Official Gazette No. 92 of 16th April 1980) regulating the transfer to ENUSA of the Junta de Energia Nuclear's duties relating to the nuclear fuel cycle.

The Order sets up, within the Ministry of Industry and Energy, a Transfer Commission responsible for establishing the directives prior to the measures to be taken by the Ministry concerning the transfer to ENUSA of the duties, personnel and establishments of the Junta connected with the nuclear fuel cycle. It will also determine the dates of such transfer, according to the order of priority laid down in the Order.

The Commission will be chaired by the Under-Secretary of the Ministry and will include the Commissioner for Energy as well as the Directors-General of the Junta and ENUSA. When the subjects to be dealt with so warrant, the Ministry of Labour and the Directorate-General for the National Estate will be represented on the Commission.

The Order entered into force on the day of its publication in the Official Gazette.

Act of 22nd April 1980 setting up a Nuclear Safety Council

The Spanish authorities are in the process of reorganising the public nuclear sector in order to separate the promotional and research aspects of the uses of nuclear energy for peaceful purposes from the regulation and control of such activities. To this effect, and in accordance with the directives in the national energy plan and with the Resolution on Nuclear Energy adopted by Parliament on 28th July 1979, Act No. 15 of 22nd April 1980 (Official Gazette No. 100 of 25th April 1980) sets up a Nuclear Safety Council which takes over part of the duties and the personnel of the Junta de Energia Nuclear provided for by the Act of 29th April 1964 on Nuclear Energy. The new Nuclear Safety Council is a body which is independent of the State central administration and has legal personality as well as its own financial resources required to carry out its duties.

The following duties are assigned to the Nuclear Safety Council; it shall:

- Propose to the Government the regulations required in matters of nuclear safety and radiation protection; this includes the setting-up of standards and criteria for the selection of nuclear installation sites, in consultation with the local competent bodies.
- Submit to the Minister of Industry and Energy reports prior to the decisions the Minister must take concerning licences for siting, construction, operation and decommissioning of nuclear installations; these reports shall be final when they concern refusal of an application for a licence.
- Undertake all types of inspection of nuclear installations and of plants for the preparation of nuclear compounds, at the stage prior to the commissioning of these installations in order to ensure compliance with the legislation in force and the conditions laid down by the licences. These inspections also cover the transport of nuclear substances.
- Undertake the inspection and control of nuclear installations during operation.
- Collaborate with the competent authorities in the preparation of standards for emergency plans and physical protection measures for nuclear installations and transport.
- Ensure the monitoring of radiation levels during the operation of nuclear installations and during transport, and assess the ecological impact of these activities.
- Grant the required permits to the personnel of nuclear installations for operating purposes.

It is recalled that the above-mentioned licences concerning nuclear installations, transport of nuclear substances and preparation of nuclear compounds are granted by the Director-General for Energy, also on the advice of the Nuclear Safety Council.

The Council is made up of a Chairman and four Counsellors appointed by the Government and selected from among those persons qualified at a national level in their special fields. The Council shall be assisted by a Secretary General appointed by the Government on the proposal of the Minister of Industry and Energy. Where necessary for the carrying out of its duties, the Council may call upon qualified officials transferred from the present personnel of the Junta de Energia Nuclear.

The financing of the Council's activities, in particular of studies and research prior to the preparation of reports on applications for licences and inspection and control duties, will be ensured by a special tax provided for under the Act. This tax shall be paid by applicants for licences or persons subject to control in accordance with this Act.

The Act also contains several transitory provisions, in particular concerning the reorganisation of the Junta de Energia Nuclear in accordance with the provisions of this Act.

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

• *Switzerland*

THIRD PARTY LIABILITY

Bill on Third Party Liability in the Nuclear Field (1979)

This second Bill on nuclear third party liability was circulated for comment to the Parliament, together with a "message" of 10th December 1979. The message, which explains the reasons underlying the provisions of the Bill, also notes its similarities and differences with the Paris Convention and the Brussels Supplementary Convention.

The new Bill follows the same principles as a previous Bill submitted earlier in 1979 (see Nuclear Law Bulletin No. 23), and introduces, inter alia, the concept of reciprocity modelled on the solution adopted in the Federal Republic of Germany. It is proposed that, for nuclear damage occurring abroad and affecting persons domiciled abroad for which the operator of a nuclear installation in Switzerland is liable, compensation due under Swiss law be paid only to the extent that the other State involved makes provision for at least equivalent treatment with regard to Switzerland.

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

• *Turkey*

REGIME OF NUCLEAR INSTALLATIONS

Definitions for Safety Codes of Practice for Nuclear Power Plants (1979)

Code of Practice No. 7, containing definitions for Safety Codes of Practice for Nuclear Power Plants was published in the Turkish Official Gazette No. 16675 of 23rd June 1979. It provides definitions of the technical terms used in the licensing applications to be submitted to the Turkish Atomic Energy Commission (TAEC), in accordance with national licensing regulations (see Nuclear Law Bulletin Nos. 15, 16 and 23).

The code is based mainly on the International Atomic Energy Agency's (IAEA) Code of Practice on the subject.

Code of Practice on Physical Protection Requirements for Nuclear Material (1979)

Code of Practice No. 8 on Physical Protection Requirements for Nuclear Material was published in the Turkish Official Gazette No 16702 of 20th July 1979. The Code defines physical protection requirements in connection with nuclear facilities in which special nuclear materials are used or stored, special nuclear materials in transit and also against any illegal action in relation to such materials.

The Code of Practice is based mainly on IAEA document INFCIRC/225/Rev.1 on the Physical Protection of Nuclear Material.

• *United States*

ORGANISATION AND STRUCTURE

Executive Order of 12th February 1980 setting up a State Planning Council on Radioactive Waste Management

This Order by the President sets up a Planning Council for the purpose of advising the President and the Secretary of Energy on waste management, including interim management of spent fuel.

The Council is made up of eighteen members, fourteen of which are designated by the President. The remaining four members are the heads of the Departments of the Interior, Transportation, Energy and the Environmental Protection Agency. The Chairman of the Council is designated by the President from among its members. The Chairman of the Nuclear Regulatory Commission (NRC) is invited to participate in the Council's activities, as are representatives of the other United States Departments when matters affecting them are considered.

The duties of the Council are, in particular, to

- recommend procedural mechanisms for reviewing waste management plans and programmes so as to ensure timely and effective State and local involvement; the mechanisms should include consultation to achieve agreement to accommodate the interests of all the parties;
- review the development of comprehensive waste management plans and provide recommendations to ensure that such plans meet the needs of the States and the local areas affected,
- advise on all aspects of siting facilities for waste storage and disposal,
- advise on an appropriate role for States and local governments in the licensing process for waste repositories,

- advise on proposed Federal regulations, standards and criteria related to waste management programmes.

The Council will prepare and submit to the President a public report on its duties, within one year of its first organisational meeting and no later than seventeen months after issuance of this Order. The Council will terminate, at the latest, eighteen months after the effective date of the Order.

The setting up of the Planning Council on Radioactive Waste Management results from the creation by the President of the Interagency Review Group on nuclear waste management and its report to the President on the subject (see Nuclear Law Bulletin No. 23, under "Articles"). The objective of the waste management programme is the disposal of all types of waste in a way which poses no significant hazard to human health or welfare, and is based on the principle that States must be involved in co-ordination and consultation but that ultimately, repositories will remain a Federal responsibility.

Executive Order of 18th March 1980 establishing a Nuclear Safety Oversight Committee

This Order of the President establishes the above Committee for the purpose of advising on the progress of Federal and States authorities and the nuclear power industry in improving the safety of nuclear power and in implementing the recommendations of the President's Commission on the Accident at Three Mile Island, approved by the President on 7th December 1979. The Committee is made up of five members appointed by the President from among citizens who do not receive a salary from the Federal Government; the Chairman is designated by the President from among the members of the Committee.

The duties of the Committee are, in particular, to:

- periodically report to the President, the Secretary of Energy and the Secretary of Health, Education and Welfare, its opinion on the progress being made in improving nuclear safety and in implementing the above-mentioned recommendations;
- advise on the extent of progress by the NRC in effecting reforms to improve nuclear safety,
- evaluate the progress in making technical modifications to power reactors to improve safety and evaluate the Federal programme in safety research,
- advise on the success of developing a co-ordinated programme to improve worker and public health safety,
- evaluate the progress of State and local governments in establishing emergency response plans and the progress made in improving public information on nuclear safety;
- prepare and transmit to the President a report on the progress of NRC and nuclear utilities in upgrading the selection criteria and the training of utility personnel, and
- report to the President its other findings, evaluations and recommendations as appropriate.

The Committee will terminate on 30th September 1980.

THIRD PARTY LIABILITY

NRC determination that the Three Mile Island accident does not constitute an "extraordinary nuclear occurrence"

The Price-Anderson Act (see Nuclear Law Bulletin Nos. 14, 16, 17, 18 and 19) defines an extraordinary nuclear occurrence (ENO) as "any event causing a discharge or dispersal of source, special nuclear, or byproduct material from its intended place of confinement in amounts offsite, or causing radiation levels offsite, which the [Nuclear Regulatory] Commission determines to be substantial, and which the Commission determines has resulted or will probably result in substantial damages to persons offsite or property offsite. Any determination by the Commission that such event has, or has not occurred shall be final and conclusive, and no other official or any court shall have power or jurisdiction to review any such determination...".

The accident at Three Mile Island (see Nuclear Law Bulletin No. 24 under "Articles" in connection with its legal and financial implications) gave rise to numerous proceedings and investigations, and the Commission initiated procedures on 20th July 1979 to determine whether the accident constituted an extraordinary nuclear occurrence as defined by the Price-Anderson Act and 10 CFR Part 140 of the Commission's regulations.

On 17th April 1980, the Commission determined that the accident at Three Mile Island did not constitute an ENO, on the basis of a review of available data and findings by a Staff Panel set up for this purpose. Therefore, the Price-Anderson system whereby, in case of an ENO, claimants for injury or damage need not prove negligence on the part of the responsible parties, does not apply, and the time within which legal proceedings may be brought cannot be extended. A negative determination leaves the court free to apply state tort law without application of any waivers of defence, which is the result intended by Congress where an ENO is not found.

Hearings were held during the investigation and public comments were included in the Panel Report. The enquiry took the two NRC Criteria into account, namely: Criterion I, substantial discharge or substantial levels offsite; Criterion II, substantial damage to property or persons offsite.

Based on calculations and measurements submitted in the Report, the Commission found that the radiological consequences of the accident did not enter the range of Criterion I and were, therefore not "substantial" for statutory purposes. The Panel experienced difficulty in applying Criterion II, partly due to the unusual nature of the accident, i.e. severe consequences onsite resulting in relatively small offsite releases, and submitted no findings. The Commission agreed with the Panel that Criterion I had clearly not been met, and since both I and II must be met to constitute an ENO, the matter should not be explored further.

The Commission's decision stated that "the accident demonstrates that Criterion II needs to be addressed by rulemaking to resolve the problems pointed out by the facts of TMI. Such rulemaking is now under way, in which Criterion I will also be re-examined. Full opportunity for public participation will be provided. It should be noted, however, that while the Criteria can be revised by the Commission as appropriate, the basic definition [of the Price-Anderson Act] and the Congressional intent behind the ENO concept must be followed".

• *Venezuela*

REGIME OF RADIOACTIVE MATERIALS

Decree of 22nd August 1978 establishing a system for record-keeping and control of nuclear materials

Decree No. 2805 sets up a system for recording and controlling nuclear source materials and special fissionable materials (published in Official Gazette No. 31639 of 21st December 1978 and corrigendum in No. 31656 of 17th January 1979), and provides that the National Council for the Development of the Nuclear Industry is responsible for establishing the system and for submitting to the Executive draft regulations concerning its organisation and operation.

Under the Decree, such materials and facilities containing them as well as their means of transport shall be subject to physical protection measures to be implemented by the Ministry of Defence with the advice and technical assistance of the National Council. The Executive Secretariat of the Council will keep records and ensure control of the use and transfer of such materials and activities in connection with them.

CASE LAW

• *Federal Republic of Germany*

CONSTITUTIONALITY OF THE PEACEFUL USE OF ATOMIC ENERGY; IMPACT OF CONSTITUTION ON PROCEDURAL LICENSING PROVISIONS

1. After its so-called Kalkar decision of 8th August 1978 (see Nuclear Law Bulletin No. 23), the Federal Constitutional Court has again pronounced itself on the constitutional aspects of the peaceful uses of atomic energy. In its decision of 20th December 1979, the First Senate of the Court confirmed the Second Senate's principal holding that the peaceful use of atomic energy is compatible with the Basic Law (Constitution) and that the legislator is competent to decide for or against such use. In addition, the latter decision stresses the fact that constitutional norms have a bearing not only on the substantive provisions of the Atomic Energy Act, but also on the administrative procedure concerning the licensing of nuclear installations.

2. The case at hand concerns a particular aspect of the licensing procedure for the nuclear power plant at Mulheim-Kärlich. The competent licensing authority granted a construction licence. However, the construction of certain specified components and systems was made subject to written building permits. The seventh of these permits, issued in 1976, concerns a number of important parts of the installation and was made immediately effective by the licensing authority.

3. A teacher living in Koblenz, situated about 7 km. from the site, brought a complaint against the construction licence as well as the above-mentioned seventh building permit. Her motion to restore the suspending effect of her complaint against the latter was rejected by the Superior Administrative Court of Koblenz in a summary proceeding. The plaintiff has brought a constitutional complaint against this decision.

4. The plaintiff argued that the immediate putting into effect of the building permit violated her fundamental rights to life and physical integrity as well as her right to take legal action against acts of the administration. As to the latter point, the plaintiff was of the opinion that the permit in question deviated from the original construction permit in such a way as to diminish considerably the safety of the plant to the detriment of neighbouring citizens. Such a deviation constituted a substantial alteration of the plant and therefore required a new licence according to Section 7 of the Atomic Energy Act. The new licence could be granted only after completion of a formal procedure according to the Nuclear Installations Ordinance (see Supplement to Nuclear Law Bulletin No. 19) involving public inspection

of the application documents and the holding of a public hearing. These provisions aiming at the protection of fundamental rights had not been respected by the licensing authority before issuing the permit in question. Thus, the decision of the Superior Administrative Court confirming the immediate putting into effect of the permit sanctioned an illegal administrative measure and deprived her of taking legal action against it, a right guaranteed by the Basic Law.

5. After having declared the complaint admissible, the Federal Constitutional Court dealt first with the general question of whether the peaceful use of nuclear energy is unconstitutional in view of its potential dangers. The Court, relying on the Kalkar decision, denied this question. It then examined the content and extent of the protection afforded by the Basic Law in the field of atomic energy against the violation by the State of the fundamental right to life and physical integrity. According to the Court, the State meets its protective duty by making the peaceful use of atomic energy subject to a licence, the granting of which is dependent on the fulfilment of substantive and procedural requirements. In particular, a licence may be granted only if it appears practically excluded, in the light of existing scientific knowledge and technology, that a damage may occur.

In addition to establishing substantive licensing requirements, the State meets its protective duty by subjecting the granting of a nuclear licence to a formal procedure which, inter alia, provides for the participation of the citizen whose life or health may be affected. The Federal Constitutional Court expressly rejected the holding of the attacked decision that this procedure serves only to enable the licensing authority to take account of all relevant factors. It follows therefrom that the plaintiff is entitled to invoke a violation of her fundamental rights if the licensing authority has disregarded those very procedural provisions aiming at the protection of those rights.

6 However, despite the erroneous holding of the other court, the Federal Constitutional Court rejected the complaint, as the decision attacked was not based on this error. This decision denying restoration of the suspending effect of the complaint resulted from a summary examination of the question of whether the building permit constituted a substantial alteration of the original construction permit and thus required a new licence. The other Court had found that such alteration was not evident so that there was no prima facie evidence for the success of the plaintiff's complaint. The interest of the plaintiff in having the putting into effect of the building permit suspended (which she could pursue in the main proceeding) had to give way to the interest of the future operators in the confirmation of the construction works. The arguments put forward by the Superior Administrative Court were not open to attack from the constitutional point of view.

7 The Federal Constitutional Court's decision is accompanied by a dissenting opinion of two Justices. In their view, the Superior Administrative Court's wrong conception of the relevance of constitutional norms in the field of procedural provisions should have led to the annulment of its decision. In the case of such an obvious violation of fundamental rights, there was prima facie evidence that the other

• *United Kingdom*

NOTE OF THREE RECENT CLAIMS FOR COMPENSATION FOR DEATH CAUSED BY RADIATION-INDUCED DISEASES

These claims were brought by the widows of workers at Windscale against British Nuclear Fuels Limited, under the Nuclear Installations Act 1965, which gives effect in the United Kingdom to the Paris Convention on Third Party Liability in the Field of Nuclear Energy. Under the Nuclear Installations Act, if a plaintiff establishes on the balance of probabilities that an injury or disease and subsequent death were caused by radiation, the source of which came from the defendants' premises, the defendants are absolutely liable to pay compensation without the need for negligence to be proved.

The relevant facts of the three cases were as follows

(1) Troughton v. BNFL

Troughton died in 1975 at the age of 55 of myeloma, an exceedingly rare type of cancer. He worked as a plutonium worker from 1954 to 1963 when it was discovered that the content of plutonium within his body exceeded the limits laid down by the International Commission on Radiological Protection (ICRP) and he was then removed from plutonium work. His myeloma was diagnosed in 1972. The evidence of eminent medical and other experts was that on the balance of probabilities, in view of special factors in his case, his disease was induced by radiation at work.

BNFL agreed to settle the widow's claim by a payment of £22,000 and costs.

(2) King v. BNFL

King died in 1973 at the age of 50 of a brain tumour. He had worked at Windscale from 1952 to 1961 as a plutonium worker, when it was suspected that the plutonium content within his body was somewhat high and he was removed from plutonium work. In 1971 he retired due to partial blindness. There was a substantial difference of opinion among the experts as to whether or not on the balance of probabilities the brain tumour was radiation-induced. Unlike the case of Troughton above, King's exposure to radiation and body content of plutonium were well within the ICRP's limits. Further, the evidence of a causal connection between radiation and brain tumours is scant and controversial. Nevertheless BNFL, while denying liability, agreed to settle the widow's claim by the payment of £8,000 and costs. This figure represents about one-third of the full compensation which might have been awarded by the court. Because King died leaving a dependent infant child, it was necessary to obtain the court's approval of the settlement of the claim.

(3) Pattinson v. BNFL

Between 1957 and 1970 Pattinson worked as a process worker at Windscale. He died in 1971 from acute myeloid leukaemia (a rare type of cancer) at the age of 36. There is some evidence of a causal relationship between leukaemia and radiation at high dose levels and this is taken into account by ICRP's recommendations. However, where, as in this case, a rare disease of this sort is contracted by a radiation worker aged only 36, the balance of probabilities would then be sufficient to conclude that the disease could have been induced by the radiation to which Pattinson was exposed. The widow's claim was therefore settled for the sum of £67,000 and costs and like the case of King above, there was a dependent infant child so that the approval by the court of the settlement of the claim was necessary.

In none of the three above cases was the issue of liability decided by the courts, the claims having all been settled by agreement between the parties before they reached the courts. None of the three cases establishes a legal precedent which would necessarily affect future cases where the facts and circumstances might be different. The amounts paid by way of compensation in the three cases varied widely. This was for two reasons: firstly, because the radiation dose or plutonium intake was less in some cases than in others and thus the probability that the disease and death was caused by the radiation sustained was less, with the result that the amount paid reflected the greater difficulty which would have been encountered in trying to establish liability to the satisfaction of a court; secondly, the age at death was an important factor in assessing the amount of compensation, which takes account inter alia of the loss of prospective earnings for the remainder of the working life.

INTERNATIONAL ORGANISATIONS AND AGREEMENTS

INTERNATIONAL ORGANISATIONS

- *The OECD Nuclear Energy Agency*

RECOMMENDATIONS FOLLOWING A REVIEW OF THE SUITABILITY OF THE SITE FOR SEA DUMPING OF RADIOACTIVE WASTE (1980)

The OECD Multilateral Consultation and Surveillance Mechanism for Sea Dumping of Radioactive Waste of 22nd July 1977 (see Nuclear Law Bulletin Nos. 20 and 23) provides that a review of the suitability of sites previously considered suitable for sea dumping of radioactive waste should be undertaken no later than five years after the relevant assessment or previous review. This review, which concerned the site currently in use, was accordingly undertaken in 1979 by a Group of Experts from countries participating in the Mechanism. The results of the review, together with the Group's conclusions and recommendations are contained in a report intended to provide a basis for future radioactive waste sea dumping operations proposed by NEA Member countries participating in the Mechanism.

The report concludes that present scientific knowledge of waste management and dumping practices indicate that the site complies with the requirements under the London Dumping Convention and the related IAEA Recommendations (see Nuclear Law Bulletin Nos. 16, 17, 18, 20 and 21), and that, therefore, the site would be suitable for the receipt of packaged radioactive waste during the next five years at annual dumping rates comparable to those reached in the past. The report recommends that, although the next assessment of the suitability of the present dumping site should normally take place in five years, a review should be undertaken before then of the scientific basis for the assessment and of the growing body of knowledge about radionuclide transport processes in the North-East Atlantic, where dumping operations are carried out.

The Steering Committee for Nuclear Energy approved the recommendations and conclusions set out in the report at its meeting on 24th April 1980.

• *International Atomic Energy Agency*

REVISED CODE OF PRACTICE ON PERSONNEL MONITORING

Under the authority of the Board of Governors, the IAEA published in 1965 a code of practice for personnel monitoring at establishments in which radiation sources are used. Since publication of this code in the IAEA Safety Series (No. 14), the International Commission on Radiological Protection (ICRP) has formulated new radiation protection concepts, new techniques and methods of radiation measurement have also been developed. Accordingly, a revision of the code was carried out by the IAEA in co-operation with the World Health Organization in 1977 - 1979, with the participation of ICRP and the International Labour Organization.

The revised "Code of Practice on the Basic Requirements for Personnel Monitoring" was approved by the Board of Governors last November. It provides guidance to those persons and authorities responsible for the protection of workers against ionizing radiation as well as those concerned with the planning and management of personnel monitoring programmes.

The Code sets forth the objectives of an adequate system of personnel monitoring for radiation workers. It covers individual dosimetry, including internal radiation monitoring, and area monitoring to the extent required for the assessment of individual radiation doses. The responsibilities of authorities for organizing the monitoring of radiation workers are discussed along with brief descriptions of monitoring methods and the rules governing their application. The general principles to be considered in selecting instrumentation and the appropriate monitoring techniques are described along with calibration techniques, methods of data handling and record keeping.

Current concepts and recommendations of the International Commission on Radiological Protection as presented in its Report No. 26 have been incorporated. New developments in the techniques and instruments have been reflected and several sections such as calibration and record keeping have been elaborated. The bibliography has been updated and new annexes added.

INTERNATIONAL NUCLEAR FUEL CYCLE EVALUATION (INFCE)

The IAEA continued to participate in the Technical Co-ordinating Committee and in all Working Groups and sub-groups established within INFCE and provided secretariat services for the study prior to the Final INFCE Plenary Conference which was held in Vienna in February 1980. Special attention was given to "institutional arrangements" including undertakings by governments and private entities to facilitate the efficient and secure functioning of the nuclear fuel cycle. It was widely agreed that conditions for the establishment of institutional arrangements should include membership on a non-discriminatory basis, the application of IAEA safeguards, adequate levels of physical protection for nuclear materials and facilities, means of dispute settlement, and a clear definition of the rights and obligations of the Parties.

The IAEA has published in nine volumes the reports of the eight INFCE Working Groups and a summary and overview report prepared by the INFCE Technical Co-ordinating Committee. The Working Group Reports deal with the following areas respectively:

- (1) Fuel and heavy water availability,
- (2) Enrichment availability;
- (3) Assurances of long-term supply of technology, fuel and heavy water and services in the interest of national needs consistent with non-proliferation;
- (4) Reprocessing, plutonium handling, recycle,
- (5) Fast breeders;
- (6) Spent fuel management;
- (7) Waste management and disposal,
- (8) Advanced fuel cycle and reactor concepts.

INTERNATIONAL SPENT FUEL MANAGEMENT

The purpose of this study is to examine the potential for international co-operation in the management of spent fuel and to determine the appropriate role which the IAEA might play in solving problems created by accumulation of spent fuel. Two meetings of an expert group were held in 1979, attended by representatives from twenty-two Member States and by observers from two international organizations (NEA and the Commission of the European Communities). It was agreed that the study, which will continue in 1980, should be directed towards the provision of a necessary fuel cycle service in the best way possible rather than towards the establishment of an international spent fuel regime within the non-proliferation framework. Two sub-groups have been established to examine (a) technical-economic considerations, and (b) institutional, legal and procedural considerations.

INTERNATIONAL PLUTONIUM STORAGE

A group of experts from twenty-five Member States first met in December 1978 and held further meetings in May and November 1979 to prepare proposals for an international plutonium storage scheme in implementation of Article XII.A.5 of the IAEA Statute. It has reached the stage of considering drafts of the legal instruments necessary for establishing such a scheme within the framework of the IAEA and the detailed operational implications for the IAEA.

SUPPLY OF NUCLEAR FUEL THROUGH THE IAEA

An Agreement was signed on 7th December 1979 between the IAEA, Indonesia and the United States of America for the supply of enriched uranium for the continued operation of a Triga Mark II research reactor at the Bandung Reactor Centre in Indonesia. This was the third supply

Agreement concluded by Indonesia for the procurement of nuclear fuel with the assistance of the IAEA. The fuel to be provided consists of 18.33 kilograms of 20% enriched uranium, which will cover Indonesia's requirements for operating the reactor over a five-year period.

Earlier supplies of fuel had been transferred to Indonesia by the United States through the IAEA under the first and second trilateral supply Agreements concluded in 1969 (about 18 kilograms of 20% enriched uranium) and in 1972 (about 12 kilograms of the same material). The reactor and the supplied fuel are under IAEA safeguards pursuant to a Project Agreement which Indonesia concluded with the IAEA in 1969. An Amendment to the project Agreement was also signed on 7th December 1979 between them to take into account the fact that Indonesia became a Party to the Treaty on the Non-Proliferation of Nuclear Weapons on 12th July 1979. Both the third supply Agreement and the Amendment to the Project Agreement were approved by the Board of Governors when it met in November 1979 in New Delhi where the twenty-third regular session of the IAEA General Conference was held at the invitation of the Government of India.

SAFEGUARDS AGREEMENTS

The Board of Governors has approved two Safeguards Agreements to be concluded by the IAEA with Lybia and Sri Lanka respectively in connection with the Treaty on the Non-Proliferation of Nuclear Weapons (NPT). In March 1980, such agreements were in force between the IAEA and 68 of the 110 non-nuclear-weapon States party to NPT.

The total number of Parties to NPT rose to 113 with the accession of St. Lucia on 28th December 1979 and the deposit of the instrument of ratification by Barbados on 21st February 1980.

SECOND NPT REVIEW CONFERENCE

The Preparatory Committee for the Second NPT Review Conference had decided at its first session that the IAEA should be invited to prepare working documents concerning Articles III, IV and V of NPT, as it had done for the First Review Conference in 1975. The background documentation prepared by the IAEA Secretariat in response to that request was considered by the Preparatory Committee at its second session in Geneva in August 1979. The comments made by the participants have been taken into account by the IAEA Secretariat in drafting the requested documents for consideration by the Preparatory Committee at its third session, held in Geneva from 24th March to 4th April.

The Second Review Conference of the Parties to NPT will take place in Geneva from 11th August to 5th September 1980.

NUCLEAR SAFETY STANDARDS

The IAEA Nuclear Safety Standards (NUSS) programme, which was started in 1974, has resulted in the publication of five codes of practice and eleven safety guides relating to thermal-neutron nuclear power plants in the following areas: governmental organisation, siting,

design, operation and quality assurance. Furthermore, thirty-six safety guides are in various stages of preparation or review.

These codes of practice and safety guides are recommendations issued by the IAEA for use by Member States in the context of their own nuclear safety requirements. In an effort to promote international application of such codes and guides and to ensure that they are adequately used as the basis for guaranteeing the safety of nuclear power plants, the IAEA informed its Member States in December 1979 of its readiness to organise visits of safety experts who had been directly involved in the preparation of those documents. The experts would assist safety personnel available in the visited country, by means of lectures and discussions, to incorporate the provisions of internationally agreed codes and guides into national regulations and to put them into practice. The first safety mission of this kind was organised by the IAEA for Yugoslavia in April in conjunction with a review of the final safety analysis report for the nuclear power plant under construction at Krsko in Slovenia.

• *Euratom*

COUNCIL DIRECTIVE OF 27TH MARCH 1979 AMENDING THE 1976 EURATOM DIRECTIVE LAYING DOWN REVISED BASIC SAFETY STANDARDS

Directive 76/579 of 1st June 1976 laying down revised basic safety standards for the health protection of the general public and workers against the dangers of ionizing radiation (see Nuclear Law Bulletin No. 18) was amended by Directive 79/343 of 27th March 1979 (Official Journal of the European Communities of 3rd April 1979). The purpose of the amendment was to extend from two to four years the time-limit within which Member States must take measures to comply with the 1976 Directive.

The Euratom Treaty provides that basic safety standards must be laid down enabling each Member State to prescribe appropriate provisions to comply with such standards; it should also be ensured that national rules concerning health protection should correspond to the latest scientific developments. Recommendations by the International Commission on Radiological Protection (ICRP) constitute an important scientific background for the Euratom standards. Accordingly the time-limit was extended to take account, in particular, of ICRP's Recommendation No. 26 which modified certain fundamental scientific concepts in radiological protection.

COUNCIL DECISION SETTING UP AN AD HOC ADVISORY COMMITTEE ON IRRADIATED
NUCLEAR FUEL REPROCESSING (1980)

On 18th February 1980, the Council of the European Communities decided to set up an ad hoc Advisory Committee on the Reprocessing of Irradiated Nuclear Fuels (Official Journal of the European Communities of 26th February 1980) with a view to achieving a community strategy on irradiated nuclear fuel reprocessing. The Committee will be composed of experts from public bodies and undertakings concerned with the various aspects of reprocessing, three experts being appointed by the Government of each Member State and three representatives by the Commission. The Committee may call upon the services of experts from non-member States in an advisory capacity.

The duties of the Committee shall include the following

- to analyse the reprocessing situation in the Community with reference to trends and available capacity;
- to collect information on interim storage capacity required pending medium-term fuel element reprocessing;
- to examine whether and how to promote industrial capacity development and to facilitate co-ordination of measures between the parties concerned;
- to consider, with regard to industrial reprocessing capacity, the desirability and feasibility of using the Euratom Treaty's relevant provisions to facilitate convergence of the interests of promoters and users.

One year after its setting up, the Committee, taking into account, inter alia, the results of the International Fuel Cycle Evaluation (INFCE), will forward to the Commission a report on the results of its work. This report, together with the Commission's proposals where appropriate, will be transmitted to the Council

AGREEMENTS

• *Finland- Australia*

AGREEMENT OF 20TH JULY 1978 CONCERNING THE TRANSFER OF NUCLEAR MATERIAL

The Agreement concerning the transfer of nuclear material between Finland and Australia (see Nuclear Law Bulletin No. 22) came into force on 9th February 1980. It was ratified in Finland by a Decree of 18th January 1980; 159/80.

• *France- Switzerland*

AGREEMENT ON EXCHANGE OF INFORMATION IN CASE OF RADIATION EMERGENCY (1979)

This Agreement was signed on 18th October 1979 by the Swiss Federal Council and the French Government, it came into force by an exchange of notes on 13th December 1979 (published in the Official Gazette of the French Republic on 21st and 22nd April 1980 by Decree No. 80-279 of 16th April 1980).

This Agreement, which is similar to the German-Swiss Agreement of 31st May 1978 on Radiation Protection in Case of Emergency (see Nuclear Law Bulletin No. 22), provides in particular, for the setting up of a mechanism for communications on emergency situations in the territories of both countries which are likely to have radiation consequences

Mutual alarm centres will be set up both in France and in Switzerland, and representatives of each country may be appointed to the competent services of the other country.

Information on emergency situations must be supplemented by additional data on existing or planned measures to protect the population in the country concerned.

• *F.R. of Germany-France*

1977 AGREEMENT ON MUTUAL ASSISTANCE IN THE EVENT OF CATASTROPHES AND GRAVE DISASTERS

The above Agreement of 3rd February 1977 between the Federal Republic of Germany and the French Republic was ratified in the Federal Republic by an Act of 14th January 1980 (Bundesgesetzblatt 1980 II, p.33). The Agreement provides that rescue teams will be sent by the Parties in all cases of catastrophe and grave disaster, including those involving nuclear hazards. It contains provisions on administrative competences, prerequisites for a quick border crossing by the assistance teams (including assistance by air), and the direction and supervision of the assistance teams. The Agreement furthermore contains regulations on costs arising from assistance, compensation of damage, and exchange of information. Thus, it provides for a comprehensive legal framework for mutual emergency assistance.

• *Japan-Canada*

PROTOCOL OF 22ND AUGUST 1978 TO AMEND THE AGREEMENT ON THE PEACEFUL USES OF NUCLEAR ENERGY

This Protocol amending the Agreement of 2nd July 1959 between Japan and Canada on co-operation in the peaceful uses of nuclear energy (see Nuclear Law Bulletin No. 23) was approved by the Japanese Diet on 9th May 1980.

• *Portugal-Spain*

CO-OPERATIVE AGREEMENTS IN NUCLEAR SAFETY

On 31st March 1980, Portugal and Spain concluded a series of Agreements on nuclear safety in furtherance of their co-operation in the nuclear field. The Agreements are briefly described below.

Protocol on co-operation in nuclear safety

Further to the Agreement of 14th January 1971 on co-operation in the peaceful uses of nuclear energy (see Nuclear Law Bulletin No. 8) the Portuguese Bureau for Nuclear Protection and Safety and the Spanish Junta de Energia Nuclear signed a Protocol on exchange of information and co-operation in the safety of nuclear installations. The Agreement provides for exchange of information on the general aspects of nuclear safety and radiation protection; study of the basic characteristics of siting, construction, operation and decommissioning of nuclear installations, and experience acquired in these areas; the problematics of planning against nuclear incidents and their environmental impact, legislation, regulations and technical standards concerning nuclear installations.

The Protocol entered into force for a period of five years on the day of its signature; it will automatically be extended for similar periods unless either Party notifies its intention to terminate it at least one year before expiry of its validity.

Agreement on co-operation in the safety of nuclear installations in border areas

This Agreement provides for exchange of information on nuclear safety and radiation protection in nuclear installations likely to affect mutually the territories of Portugal and Spain. The Agreement defines the type of nuclear installation concerned, the border areas and the respective competent authorities.

The competent authorities of the Party concerned must notify to the other Party any applications for licences for the siting, construction or operation of nuclear installations in border areas, and must also send all documents on the safety and radiation protection of the installation concerned, with sufficient advance notice to enable the other Party to make any comments on the project concerned. The competent authorities of both Parties also undertake to establish in their respective territories, the systems required to detect any radiation emergency and to inform each other in cases where such emergency may affect them. Provision is also made for authorised officials to cross the frontier speedily in case of emergency. The Agreement also sets up a Standing Technical Commission made up of representatives designated by the competent authorities of both Parties. This Commission will meet at least once a year and may be convened at any time at either Party's request.

It is specified that third party liability is governed by the international Conventions on Nuclear Third Party Liability ratified by both Parties.

The Agreement will enter into force on the day of the deposit of the instruments of ratification, and will remain valid for a period of ten years, which will be automatically extended for five-year periods unless either Party gives twelve months' notice to the contrary.

Protocol concerning technical information on nuclear installations in border areas

This Protocol was concluded between the Portuguese Bureau for Nuclear Protection and Safety and the Spanish Junta de Energia Nuclear under the above Agreement on the safety of nuclear installations in

border areas. Its purpose is to prescribe the type of information referred to in the Agreement. It lays down in detail all the documents to be supplied concerning the siting, construction, operation and decommissioning of nuclear installations, including the geological, seismological, meteorological, hydrological and ecological aspects of the sites concerned, for purposes of environmental protection; the characteristics of the projected installations and emergency plans must also be provided.

This Protocol will remain in force for the same period as the above Agreement.

• *Venezuela*

CO-OPERATIVE AGREEMENTS ON THE PEACEFUL USES OF NUCLEAR ENERGY (1979)

Venezuela entered into three Co-operative Agreements, in the nuclear field with Spain, Brazil and Argentina respectively. A brief description of the Agreements is given below.

Agreement with Spain supplementary to the basic technical co-operative Agreement

On 2nd February 1979, Venezuela and Spain concluded an Agreement in pursuance of the Agreement of 10th August 1973 on basic technical co-operation in nuclear R and D for peaceful purposes. Co-operation covers, in particular, reactor design, construction and operation, radioisotope production, ore prospecting, exchange of information and personnel.

The Agreement applied provisionally upon its signature and will come into force for five years upon notification by the Parties of compliance with the relevant constitutional requirements of their internal legislation. It will automatically be extended for one-year periods unless either Party denounces it at least three months before the relevant expiry date.

Memorandum of Understanding with Brazil

On 27th July 1979, Venezuela and Brazil entered into a Memorandum of Understanding laying down the basis for technical and scientific co-operation in the nuclear field. To this effect, both Governments will consult each other on the development of their scientific and technical activities and will entrust their specialised institutions with implementation of this co-operation.

The Memorandum came into force on the day of its signature.

Agreement with Argentina supplementary to the basic technical co-operative Agreement

On 8th August 1979 Venezuela and Argentina concluded an Agreement in pursuance of the Agreement of 29th February 1972 on basic technical co-operation in nuclear R and D for peaceful purposes.

The Agreement covers the same fields as the Venezuela/Spain Agreement (see above), and will come into force for five years upon notification by the Parties of compliance with the relevant constitutional requirements of their internal legislation. It will automatically be extended for one-year periods unless either Party denounces it at least six months before the relevant expiry date.

MULTILATERAL AGREEMENTS

• *Federal Republic of Germany*

IMPLEMENTATION OF THE 1973 VERIFICATION AGREEMENT (1980)

The Act of 7th January 1980 implements in the Federal Republic of Germany the Treaty of 5th April 1973, between Belgium, Denmark, the Federal Republic of Germany, Ireland, Italy, Luxembourg, the Netherlands, Euratom and the IAEA concerning the implementation of Article III, paragraphs 1 and 4 of the Non-Proliferation Treaty (NPT).

The above-mentioned Act (published in Bundesgesetzblatt 1980, I, p.17) provides for the necessary legal instruments to bring into force the provisions of the so-called "Verification Agreement" between the Non-Nuclear Weapon States of the Communities, Euratom and the IAEA. Since the Non-Proliferation Treaty and the Verification Agreement are only binding on the Member States and do not directly oblige the individual operators to accept the safeguard measures, there was a need for a national legal basis for enforcement of the IAEA's Safeguards. This basis is now supplied by the Act, which lays down the obligations and duties of those persons who produce, store, treat, process, transport or otherwise use source or special fissionable material. It furthermore contains provisions on costs, compensation of damage, etc.

The Act entered into force on 12th January 1980. Together with Regulation No. 3227/76 of 19th October 1976 of the Commission of the European Communities (Official Journal No. L 363, 1976) concerning the application of Euratom safeguards, a comprehensive legal framework is now provided for national implementation of the NPT.

• *Italy*

EUROPEAN AGREEMENT CONCERNING THE INTERNATIONAL CARRIAGE OF DANGEROUS GOODS BY ROAD

Italy ratified the European Agreement on the Carriage of Dangerous Goods by Road (ADR) of 20th September 1957 (Act No. 1839 of 12th August 1962).

Decree No. 895 of the President of the Republic of 20th November 1979 implements in Italy the amendments made in recent years to Annexes A and B (which cover radioactive materials) of the Agreement.

• *Norway*

THE EUROPEAN AGREEMENT CONCERNING THE INTERNATIONAL CARRIAGE OF DANGEROUS GOODS BY ROAD

On 5th February 1976, Norway acceded to the European Agreement concerning the International Carriage of Dangerous Goods by Road (ADR). By Royal Decree of 12th February 1976 the ADR was put into force as from 5th March 1976.

By Royal Decree of 20th December 1979, the provisions of ADR were adopted for domestic carriage of dangerous goods. The competent authority under the regulations is the Public Road Administration. Among other tasks the Public Road Administration may, under special circumstances, grant exemptions from the provisions of the Decree. It may also prepare regulations supplementing the Decree. Such Regulations came into force on 1st April 1980.

The above-mentioned Regulations were issued by the Ministry of Communications pursuant to Act No. 4 of 18th June 1965 concerning road traffic.

TEXTS

• *Spain*

ACT 15/1980 OF 22ND APRIL 1980 SETTING UP
A NUCLEAR SAFETY COUNCIL*

Section 1

1. The Nuclear Safety Council shall be created as a body governed by public law, independent of the Central State Administration, with its own legal personality and its own assets separate from those of the State, and shall be the sole body competent in the field of nuclear safety and radiological protection. It shall be governed by its own Statute, to be drawn up by the Council and approved by the Government, and the text of which shall be submitted to the Committees for Industry and Commerce of both Houses prior to publication.
2. The Act of 26th December 1958 on the Legal Status of Autonomous State Undertakings shall not be applicable.
3. The Council shall draw up the first draft of its annual budget in accordance with the provisions of the General Budget Act and submit it to the Government for inclusion in the General State Budget.

Section 2

The duties of the Nuclear Safety Council shall be as follows

- (a) to make proposals to the Government concerning regulations required in the field of nuclear safety and radiological protection as well as any revisions thought to be necessary. Criteria relating to the selection of sites for nuclear and radioactive installations of the first category shall be laid down in these regulations on a proposal by the Autonomous Regional Communities, Pre-Autonomy Bodies or, in their absence, by the provinces, in the form and within the time-limits prescribed,
- (b) to report to the Minister of Industry and Energy before the latter takes decisions in the following areas

* Unofficial translation by the Secretariat.

- (1) the issue of prior authorisation and site approvals for nuclear and radioactive installations subject thereto;
- (2) the issue of authorisation for the construction, commissioning, operation and closure of nuclear and radioactive installations, for the transport of nuclear substances or radioactive materials and for the manufacture and official approval of components of nuclear and radioactive installations which the Council thinks may affect nuclear safety;

the reports shall be mandatory in all cases and shall have permanent effect when they recommend refusal of authorisation or otherwise impose positive conditions;

- (c) to carry out all types of inspection within nuclear or radioactive installations, with regard to transport and in component factories, during the different phases of planning, construction and commissioning, with the aim of ensuring compliance with current legislation and with conditions imposed by authorisations, and with the power, should any irregularity with regard to safety become apparent, to stop work until such irregularity be removed or, should it be impossible to remove, to recommend revocation of the authorisation;
- (d) to inspect and control nuclear and radioactive installations while in operation with a view to ensuring that all standards and conditions, both general and specific to each installation, are observed, with power to suspend operation of the installations for safety reasons; further, to propose the imposition of penalties regarding nuclear energy laid down by law, including the revocation of licences, permits or authorisations;
- (e) to collaborate with the competent authorities in establishing criteria for contingency plans and for the physical protection of nuclear and radioactive installations as well as for the transport of nuclear substances and radioactive materials; when drawn up, to participate in the approval of these plans before the installations are put into operation;
- (f) to monitor and control radiation levels both inside and outside nuclear and radioactive installations and the particular or cumulative effect of these in the surrounding area and during any transport operation; to monitor also the doses received by the operating staff and to evaluate the ecological impact of the installations;
- (g) to grant and renew, in accordance with the norms laid down by the Council, the licences required by the operating staff of nuclear and radioactive installations and by supervisors, operators and Heads of Radiological Protection Services;
- (h) when so requested, to advise the courts and agencies of the public administration on nuclear safety and radiological protection matters;
- (i) to maintain official relations with similar bodies from other countries on matters within its competence;
- (j) to keep the public informed on relevant matters as and when the Council shall decide but without prejudice to the provision of information concerning its administrative activities as required by law and within the specified time-limits;

- (k) to keep itself informed by the Government, and to advise it with respect to engagements entered into with other countries or International Organisations concerning nuclear safety and radiological protection; such engagements will be taken into account in the exercise of the functions conferred on the Council by this Act;
- (l) to draw up plans for research on nuclear safety and radiological protection and to keep abreast of developments,
- (m) request precise information and give its opinion with respect to cases where persons may have been affected by the release of ionizing radiation from nuclear or radioactive installations.

Section 3

1. Save where otherwise provided in the respective Constitutions of the Autonomous Regional Communities, the relevant procedural steps and the issue of the necessary authorisations for nuclear and radioactive installations, for the transport of nuclear substances and radioactive materials and for the manufacture of nuclear and radioactive components shall be a matter for the Ministry of Industry and Energy.

2. Prior authorisations, site approvals and construction permits, and provisional and definitive operating licences for nuclear and radioactive installations of the first category as well as authorisations for the closing of these installations shall be issued by the Ministry of Industry and Energy. Other licences shall be issued by the Director General for Energy, save as otherwise provided in the respective Constitutions of the Autonomous Regional Communities.

3. In the case of approval of a site, the Minister of Industry and Energy shall first ask for a report from the Autonomous Regional Authorities, Pre-Autonomy Bodies or, in their absence, from the provinces concerned, for subsequent submission to the Nuclear Safety Council, and prior to requesting the opinion of the Council. The report shall examine whether the proposal is consistent with current law and regulations and the powers and duties specified therein and shall incorporate other reports from local authorities concerned in regard to land-use planning and environmental matters within their competence.

4. In cases covered by this Section, the Government may use the powers provided under Section 180 (2) of the Land and Urban Planning Act. Authorisations and licences issued in favour of an agency of the public administration shall not be revoked or made subject to conditions on grounds of safety which fall within the competence of the Council.

Section 4

1. The Nuclear Safety Council shall consist of a Chairman and four Members.

2. The Council shall, on the proposal of the Chairman, appoint one of the Members Vice-Chairman and he shall replace the latter in case of illness, vacancy or absence.

3. The Council shall be assisted by a General Secretariat to which shall be attached the working units necessary for the carrying out of its objects. The Secretary General shall be entitled to give his opinion at meetings, but not to vote.

4. Agreement within the Council shall be reached in accordance with the rules laid down in Title I Chapter II of the Administrative Procedure Act.

Section 5

1. The Chairman of the Nuclear Safety Council and the Members shall be chosen from among persons of recognized competence in the fields of nuclear safety, technology, radiological and environmental protection, medicine, law or in any other field connected therewith as well as in the fields of energy in general or of industrial safety. In this context, the attributes of independence and objectivity shall be regarded as particularly desirable.

2. They shall be appointed by the Government on the proposal of the Minister of Industry and Energy. The Government shall first inform the Chamber of Deputies which, in the month following, may, through the agency of the competent Committee and with the agreement of three-fifths of its members, give its consent to or veto the appointments. After the period of one month has expired and in the absence of an express objection from the Chamber, the appointments shall be deemed to have been accepted. Appointments, which may, following the same procedure, be renewed, shall be for a period of six years.

3. The Secretary General of the Nuclear Safety Council shall be appointed by the Government on the proposal of the Minister of Industry and Energy after first obtaining a favourable report from the Chamber. No person over the age of sixty-five may occupy the post of Secretary General.

Section 6

The posts of Chairman, Members and Secretary General of the Nuclear Safety Council shall be incompatible with any other duty or responsibility, whether remunerated or not. These officials shall, during their term of office, receive only the remuneration fixed having regard to the importance of their responsibilities.

Section 7

1. The Chairman and Members of the Nuclear Safety Council shall cease to occupy their posts:

- (a) when they reach the age of seventy years;
- (b) when the period of their mandate expires;
- (c) when they so request;

- (d) when they are for any reason disqualified under this Act,
- (e) by decision of the Government, and following the same procedure as for their appointment, where they are considered unfit for the performance of their duties or when they cease to give proper attention to the duties of their office.

2. If, for one of the above-mentioned reasons other than that under (b), a Member ceases to occupy his post, he shall be replaced until the end of his mandate by a new Member.

Section 8

1. The technical staff of the Nuclear Safety Council shall constitute a body of civil servants the composition of which shall be established in its budgetary plan. The procedure for staff recruitment shall be laid down in the Statute of the Council.

2. The Council may, in accordance with the rules laid down in the Statute, engage national or foreign staff to carry out specific tasks or for a period of time not exceeding one year, or for the purpose of undertaking studies and providing advice and opinions together with appropriate persons or bodies.

Section 9

The assets and finance available to the Council for the performance of its duties shall be;

- (a) the proceeds of the charge created by this Act,
- (b) the grants, fixed annually, from the general State budget,
- (c) any other assets or finance legally assigned to it.

Section 10

1. For the purposes of the provisions of the previous Section a charge shall be introduced by services rendered by the Nuclear Safety Council. The charge shall apply throughout Spain.

2. The charge payable under this Section shall be governed by the provisions of this Act and, where it is silent, by the provisions of the General Tax Act and other supplementary provisions.

3. The charge shall be payable on the provision by the Nuclear Safety Council of the services listed or, as the case may be, on the issue of the authorisations or licences specified below.

- (a) the making or carrying out of studies, reports or inspections which, in accordance with current regulations, are required for applications for site approval for nuclear installations or which are necessary for the issue of authorisations or permits relating to the construction and commissioning of such installations;

- (b) inspections and controls which it is necessary to carry out in order to ensure as far as possible the continuous and safe operation and working of nuclear installations;
- (c) the making or carrying out of studies, reports or inspections which, in accordance with current regulations, are required for applications for site approval for radioactive installations or which are necessary for the issue of authorisations or permits relating to the construction and commissioning of such installations;
- (d) inspections and controls which it is necessary to carry out in order to ensure as far as possible the continuous and safe operation and working of radioactive installations;
- (e) studies and reports required by law in order to obtain authorisation to close down nuclear and radioactive installations;
- (f) the issue and renewal of licences for the operating staff of nuclear and radioactive installations;
- (g) information and reports which are required by law for authorising the transport of nuclear substances or radioactive materials;
- (h) inspections and controls of the transport of nuclear substances and radioactive materials;
- (i) studies and reports required by law for the manufacture of nuclear or radioactive components;
- (j) inspections and controls necessary to guarantee the adequate manufacture of nuclear and radioactive components;
- (k) studies, reports or tests necessary for the official approval of radioactive appliances, packing, packages or containers;
- (l) inspections and controls relating to radioactive appliances, packing, packages or containers which have already been officially approved.

4. The charge shall be payable by the natural or legal person who applies for an authorisation, permit or licence referred to in subsection 3 of this Section.

5. Basis of assessment and rates:

- (a) The operations mentioned in paragraph (a) of subsection 3 shall involve payment of a charge of 0.20% of the actual total value of the work carried out.

For the purposes of this Act and on the basis of the total value of the work to be carried out according to the budget, provisional payments on account shall be made by way of the following percentages and at the following times:

- 10% on applying for prior authorisation or site approval;
- 30% on applying for building authorisation;

- 40% on the commencement of construction;
- 20% on applying for authorisation to commence operations.

In the case of nuclear power plants, if several units of identical design are installed on the same site, the charge for the second and following units shall be reduced to $\frac{1}{5}$ of the amount due on applying for prior authorisation, site approval or building authorisation, and to $\frac{1}{3}$ of the amount due on commencement of construction or on applying for authorisation to commence operations.

The balance, having regard to the actual total value of the work carried out, shall be paid immediately after the issue of the last authorisation.

- (b) Studies and reports under paragraph (b) of subsection 3 of this Section shall bear a charge at an annual rate of 0.05% of the value of the installation's annual production, this value being calculated on the basis of the average cost of production over the same period.

The charge shall become due on 31st December in each year and must be paid by the person liable during the course of the month of January following.

- (c) The charge on the activities mentioned in paragraph (c) of subsection 3 of this Section shall be fixed at the amount obtained by applying the following percentages, which relate to the category and characteristics of the installation, to the actual total value of the work carried out:

First category: 0.2%, payable at the following times

- 10% on applying for prior authorisation or site approval,
- 30% on applying for building authorisation;
- 40% on commencement of construction;
- 20% on applying for authorisation to commence operations.

If other installations of similar design as the first are built on the same site, or if the installations are enlarged, the charge payable shall be reduced to $\frac{1}{5}$ of the amount due on applying for prior authorisation, site approval or building authorisation, and to $\frac{1}{3}$ of the amount due on commencement of construction or on applying for authorisation to commence operations.

Second category: 3.2%, payable at the following times

- 50% on applying for prior authorisation or site approval,
- 50% on applying for authorisation to commence operations.

In the case of subsequent enlargements or modification of the original design for an installation to be built on the same site, the charge shall be 50% of the amount specified above,

Third category: 3.2%, payable on applying for authorisation to commence operations.

In the case of subsequent enlargements or modification of the original design for an installation to be built on the same site, the charge shall be 50% of the amount specified above.

For the purposes of this Act, payments on account shall be made with reference to the total value of the work to be carried out according to the relevant budget. The final payment, having regard to the total value of work actually carried out, shall be made immediately after the issue of the last authorisation;

- (d) As regards the inspections and controls referred to in paragraph (d) of subsection (3) of this Section, the charge shall be paid at an annual rate calculated on the basis of the category within which the installation falls and in accordance with the following scale:

First category: fuel cycle installations,

an amount equal to 0.02% of the value of the installation's annual production, calculated on the basis of the average cost of production over the same period.

First category: other installations,

- 425,000 pesetas;

Second category,

- 125,000 pesetas;

Third category,

- 85,000 pesetas;

The charge shall become due on 31st December in each year and shall be paid by the person liable in the course of the month of January following.

- (e) As regards the studies and reports referred to in paragraph (e) of subsection (3) of this Section, the charge shall be fixed at a rate equal to 1% of the total amount of the closing budget of the installation in question.

The tax shall become due on submission of the application for closure.

- (f) The issue and renewal of licences of operating staff (supervisors and operators) of nuclear and radioactive installations and of the licence of the Head of the Radiation Protection Service, shall bear a charge at a rate calculated having regard to the category of staff concerned and the category of the installation in which they are to work, in accordance with the following scale expressed in pesetas:

Installation	Issue of licence for Supervisor Operator	Issue of licence Head Rad. Prot. Service	Licence renewal	Licence for Head of Service
Nuclear	100,000	100,000	13,000	13,000
Radioactive first category	30,000	90,000	13,000	13,000
2nd-3rd categories	12,000	-	7,000	-

The charge shall become due and be paid on submission of the application to take the relevant tests.

- (g) As regards the reports and studies referred to in paragraph (g) of subsection 3 of this Section, the charge shall be fixed at a lump sum of 105,000 pesetas for each transport authorisation.

The charge shall be paid when applying for the transport authorisation.

- (h) As regards the inspections and controls referred to in paragraph (h) of subsection 3 of this Section, the charge shall be fixed for each transport operation at a lump sum of 100,000 pesetas for nuclear substances and 90,000 pesetas for radioactive materials.

The charge shall become due and shall be paid at the time of commencement of the transport operation.

- (i) As regards the studies and reports referred to in paragraph (i) of subsection 3 of this Section, the charge shall be fixed at a lump sum for each authorisation calculated with reference to the type of component involved

nuclear components - 500,000 pesetas,

radioactive components - 205,000 pesetas.

The charge shall become due on submission of the appropriate application.

- (j) The inspections and controls mentioned in paragraph (j) of subsection 3 of this Section shall bear an annual lump sum charge fixed with reference to the nature of the component

nuclear components - 2% of their cost,

radioactive components - 1% of their cost.

The charge shall become due on delivery of the equipment to the customer.

- (k) As regards the studies, reports and tests referred to in paragraph (k) of subsection 3 of this Section, the charge shall be fixed at a lump sum of 205,000 pesetas.

The charge shall become due and shall be paid on applying for official approval.

- (l) As regards the inspections and controls referred to in paragraph (l) of subsection 3 of this Section, the charge shall be fixed at an annual lump sum of 85,000 pesetas,
the tax shall become due on 31st December in each year.
6. The charge shall be paid through the Nuclear Safety Council except in cases of direct payment by the person liable. In the latter case the statements of payment shall be submitted to the Council who may correct any factual errors.
7. The charge shall be paid to the Finance Office of the province in which the person liable has his principal residence.
8. The total proceeds of the charge shall be specifically allocated to cover the cost of services rendered by the Council.
9. The Government may, on the proposal of the competent Ministers, enact provisions to give effect to this Section.

Section 11

The Nuclear Safety Council shall, every six months, submit a report on the conduct of its activities to the Chamber of Deputies and the Senate.

FIRST SUPPLEMENTARY PROVISION

For the purposes of this Act, the definitions contained in Section 2 of the Nuclear Energy Act 25/1964 of 29th April 1964 shall be applicable in addition to the following:

- 1 radioactive installations of the first category are:
- (a) factories for the production of uranium, thorium and their compounds;
 - (b) factories for the production of natural uranium fuel elements,
 - (c) industrial irradiation installations,
2. radioactive installations of the second category are
- (a) installations where radionuclides which may be used for scientific, medical, agricultural, commercial or industrial purposes are handled or stored if their total activity is greater than 100 microcuries, 1 millicurie, 10 millicuries or 100 millicuries according to the classification of radionuclides established by the Government taking into account the international regulations;

- (b) installations using apparatus which generates X-Rays and which may be operated at a peak voltage of more than 200 kilowatts,
- (c) particle accelerators and installations in which sources of neutrons are stored.

3. radioactive installations of the third category are

- (a) installations in which radionuclides of a lower activity than those mentioned in the preceding subsection are handled or stored if their total activity is greater than 0.1, 1, 10 and 100 microcuries for the different groups according to the classification of radionuclides established by the Government taking into account the international regulations,
- (b) installations using apparatus which generates X-Rays and which operates on a peak voltage of less than 200 kilowatts.

SECOND SUPPLEMENTARY PROVISION

The amount of the penalties referred to in Section 2 of this Act and the persons competent to impose them are as follows:

- provincial and regional authorities and Heads of Service, up to 500,000 pesetas;
- Directors General and authorities of equivalent level, up to 5,000,000 pesetas;
- the Minister of Industry and Energy, up to 10,000,000 pesetas,
- the Council of Ministers, up to 100,000,000 pesetas

THIRD SUPPLEMENTARY PROVISION

The Nuclear Safety Council may delegate the performance of its duties to the Autonomous Regional Communities in accordance with the general criteria laid down by the Council itself for such performance

FIRST TRANSITIONAL PROVISION

Three years after the appointment of the first Members of the Nuclear Safety Council, one half of them, chosen by lot, shall relinquish their posts. The provisions of Section 5 of this Act shall then apply in their entirety. Members whose term of office is ended shall be eligible for reappointment in accordance with the procedure laid down in Section 5.

SECOND TRANSITIONAL PROVISION

Once the Chairman and Members have been appointed, the Council shall be constituted and shall carry out the duties specified in Section 2. Pending the establishment of the technical structure of the Council in accordance with the rules laid down, the "Junta de Energia Nuclear" shall act in place of the Council.

THIRD TRANSITIONAL PROVISION

The Council shall determine the criteria in accordance with which it may, should the need arise, recruit personnel currently on the staff of the Junta de Energia Nuclear.

FOURTH TRANSITIONAL PROVISION

1. The Nuclear Safety Council shall take over the files, as they stand when the Council is set up, relating to authorisations for nuclear and radioactive installations.
2. Notwithstanding the provisions of the previous subsection, the Nuclear Safety Council shall carry out the duties described in Section 2 of this Act not only with respect to installations which may be authorised in the future but also with respect to those, at whatever stage they may have reached, for which an authorisation has already been granted.

FIRST FINAL PROVISION

Six months after the date on which the Council is constituted, the Government shall approve the Statute of the Nuclear Safety Council as well as the regulatory provisions necessary for giving effect to this Act.

SECOND FINAL PROVISION

The Government shall reorganise the Junta de Energia Nuclear so that its organisation, duties and resources conform with the provisions of this Act.

THIRD FINAL PROVISION

The necessary financial appropriations shall be made for the financial year in which this Act enters into force. Appropriations for subsequent financial years shall be entered directly in the Nuclear Safety Council's budget.

FOURTH FINAL PROVISION

On the proposal of the Nuclear Safety Council, once it has been set up, the Government may transfer to it resources allocated to the Junta de Energia Nuclear for the carrying out of the duties given to it under this Act.

REPEALS

Any provisions contrary to this Act are hereby repealed

STUDIES AND ARTICLES

ARTICLES

FRENCH CASE LAW AND THE USE OF NUCLEAR ENERGY*

Jean Hébert

Doctor of Law

Honorary President of the
International Nuclear Law Association

INTRODUCTION

Following a decision of 29th March, 1899 by the Seine Civil Court, a considerable body of case law has been built up in France on liability incurred in the use of ionizing radiation (X-rays and then radium).

Since 1913 these cases have had the merit of laying down the principle that exposure must be justified. This principle animates the current recommendations of the International Commission on Radiological Protection (ICRP), but one must admit that it has failed to resolve the problem of establishing a causal link when damage is deferred.

Mention may also be made of the cases concerning the application of presumptions under legislation on compensation for industrial diseases, to diseases attributed to exposure to ionizing radiation. These cases have come to define the concept of habitual exposure, which is one of these presumptions, and to lay down especially strict conditions concerning the admissibility of evidence rebutting it.

In another connection a number of decisions have had to define the legal status of the French Atomic Energy Commission (CEA) a ruling on some of the implications of this definition. More recently the adoption by the CEA of a group structure and the creation of subsidiaries such as the General Company for Nuclear Materials (COGEMA) have also been the subject of court decisions.

However, it is only in the last decade that the debate on nuclear energy has got underway in France

* Responsibility for the views expressed and the facts given in this Article rests solely with the author.

Indeed it is curious to note that from the construction of the ZOE pile (which first went critical in 1948) to that of the Fessenheim power station begun in 1971 France's nuclear effort - as seen in its research centres, its fuel cycle installations from mining to reprocessing and storage of wastes, natural uranium graphite-moderated gas-cooled nuclear power stations and even military activities - has been made in a climate of public opinion ranging from a favourable attitude to indifference, but at any rate free from systematic hostility.

Again today all the political parties represented in the French Parliament have come out in favour of a major nuclear programme. Urged on by the present President of the Republic, the Government keeps firm control of its implementation, in particular as regards ensuring that the procedures for issuing the various permits necessary for constructing and operating nuclear power stations are carried out properly, but without unjustified delay.

Nevertheless certain minorities engaging in intense militant activity are campaigning against the implementation of the nuclear programme. What they do consists mainly of propaganda and demonstrations, which are perfectly legitimate in French law. However, indoctrinators may cause certain individuals to commit acts of violence, make threats or damage property involving the commission of various criminal offences.

Public enquiries provide the best opportunity for the propaganda of anti-nuclear associations to have some prospect of persuading larger population groups to support their objections. As French regulations lay down no conditions regarding residence or the establishment of an interest when submitting observations to committees of enquiry, profound changes have taken place, both quantitative and qualitative.

Whereas the first public enquiry in October and November, 1967 concerning the construction at Fessenheim of a natural uranium graphite-moderated gas-cooled power station recorded only three objections, which were made by inhabitants of the neighbouring village regarding their personal farming problems, more recent enquiries have recorded several tens of thousands of objections mainly from people living in other departments and even abroad, usually in the form of petitions bearing a number of signatures and containing stereotype arguments against nuclear energy in general. These arguments have not succeeded in persuading the competent authorities to refuse the licences requested, but only to alter the enquiry procedures to make them a source of information for the public, alongside their traditional role of informing the licensing authority of the public's objections.

Having failed to prevent the issue of the necessary licences through non-litigious administrative channels, the anti-nuclear movements tried to get the Courts to revoke them and stop the work.

This article will review the relevant cases and the decisions given.

However, owing to the wide international distribution of this Bulletin we shall start by giving the reader who is unfamiliar with French law some explanations to enable him to understand the choice of legal remedies and the answers given by the Courts.

During the French Revolution Section 13 of Title 2 of the Act of 16th to 24th August, 1790 ruled that "judicial functions are distinct from and shall always remain separate from administrative functions. Judges cannot, without abusing their authority, interfere in any way with the operations of the administrative authorities nor summon the latter in their official capacity to appear before them". Apart from the influence of Montesquieu's works, the members of the Constituent Assembly wished to use this Act to prevent a return of the abuses by the "Parlements", the high courts of justice under the former régime, which did not hesitate to interfere with the activity of the government, e.g. by suspending duly authorised public works. Consequently, since the French Revolution the courts of justice have not been empowered to issue orders binding on the government (save in exceptional cases, as we shall see later in Section II).

In a second stage, during the nineteenth century, the active administration (e.g. the Prefects) was gradually separated from the administrative courts (Conseil d'Etat and ordinary administrative courts) so as to prevent the government from being judge of the legality of its own actions or in cases between it and the public.

On the other hand an unwritten rule lays down that an administrative judge may not perform an administrative act (make a regulation, order works to be carried out, etc.) by assuming the role of the government or by giving it orders. He assesses the legality of the government's actions, but not their desirability. Admittedly events have led to exceptions being made to this unwritten rule or have weakened it, but the Conseil d'Etat is very chary about departing from it, as we shall see later.

Thus in France we have two distinct systems of law courts; first, the civil courts, consisting mainly of the "tribunaux de grande instance" (TGIs) (i.e. the ordinary courts of first instance), the Courts of Appeal and the Court of Cassation, which decide cases between private persons on the basis of civil law, commercial law, etc.; and secondly, the administrative courts, consisting mainly of the tribunaux administratifs (TAs) and the Conseil d'Etat (CE)(1), which decide cases between the government and private persons on the basis of administrative law. The essence of administrative law is to be found in rules derived from decisions of the Conseil d'Etat although a proliferation of enactments of various kinds also plays an important part in particular fields such as the construction and operation of industrial plants.

I. ATTEMPTS TO HAVE WORKS STOPPED

Electricity supply is regarded as a "public service", so that power stations which supply the transport and distribution systems are "public works". Now the priority given to the general interest over

(1) The Conseil d'Etat is divided into sections, one of which, the Section du Contentieux, acts as a court of law, while the others, e.g. the Section des Travaux Publics, act as legal advisers to the government by giving opinions, examining draft Decrees, etc. A joint Tribunal, the Tribunal des Conflits, on which the two highest Courts (The Court of Cassation and the Conseil d'Etat) are equally represented, settles questions of jurisdiction as between the two systems of courts.

private interests which the concepts of "public service" and "public works" tend to establish is protected by the rule of the privileged status of public works. Even if the public works are constructed in irregular conditions, they will not be destroyed and any prejudice suffered by private persons is made good by money payments.

The pace of justice is slower than that of the modern contractor's plants, so that it is understandable if the opponents of nuclear energy are not content merely to apply for the annulment of licences, but try to have the works stopped as from the commencement of proceedings. Two remedies appeared available to achieve this result, civil action and special interlocutory (de référé) proceedings or procedures to obtain the suspension of works under administrative law

1 1 The civil remedy for "voie de fait" (arbitrary administrative action) is an exception to the principle of the separation of powers mentioned in the introduction and derives from the rule which makes the civil courts the protectors of property rights. It is therefore a survival of historical circumstances; the lawyers of the Revolution and Napoleon's empire, expressing the opinions of the victorious bourgeoisie, made the right of ownership the keystone of the Law

At that time, as we have seen, the administrative courts were not yet separate from active administration, so that only a civil court was sufficiently independent to defend this sacrosanct right.

"Voie de fait" consists of a physical act by the government which is "manifestly" illegal and violates the right of ownership or a "basic freedom".

Voie de fait has been invoked in several cases brought against the construction or starting up of nuclear power stations. We would mention:

- application to the presiding judge of the Bourgoin TGI (référé) (2) on 30th May, 1975 and the presiding judge of the Lyons TGI on 5th May, 1977 (référé) to stop the earthworks and site development for the Creys-Malville (breeder reactor) power station and prevent the construction of the power section itself,
- application to the presiding judge of the Cherbourg TGI (référé) on 28th April, 1977 and an appeal to the Caen Court of Appeal on 28th June, 1977 to stop quarry testing prior to the construction of the Flamanville power station,
- application to the presiding judge of the Paris TGI (référé) on 2nd November, 1979 to suspend the loading of the Gra elires and Tricastin I reactors.

(2) The "référé" is a summary procedure designed to produce a provisional ruling - which will not bind the judge of the substance of the case - either in an emergency (e.g. to prevent imminent damage) or where there may be difficulty in enforcing a judgment or other decision. The ruling is usually made by the presiding judge of the court, but only after hearing both sides.

In these cases it was difficult for the plaintiffs to establish that the operations objected to were "manifestly incapable of being related to the application of a law or regulation", i.e. had no real connection with an administrative power. Nevertheless they tried to establish this in the Creys and Flamanville cases, and a discussion arose whether, having regard to the nature or location of the works concerned or to the date of entry into force of the Act on nature protection, these works should be preceded by this or that public utility Decree or project licence or by an impact study. We shall not go further into these arguments based on legislation but shall now turn to a discussion of the second conditions, i.e. infringement of the property rights or at least of "basic freedoms", which we think is of more interest to foreign readers

The plaintiffs pleaded before the presiding judges of the Bourgoin and Lyons courts that there was "infringement of the right to quality of life, if not of the right to live". At Caen they pleaded "the protection of natural spaces and landscapes, the preservation of animal and vegetable species, the maintenance of biological balances in which they played a part and the protection of natural resources from all the causes of degradation threatening them", i.e. the objectives of the Act of 10th July, 1976 on nature protection. In Paris they pleaded the risk of "imminent, irreversible and irreparable damage of an ecological and economic nature". Were basic freedoms involved? The courts concerned did not agree that they were.

It is well known that the French people, from the Declaration of the Rights of Man and the Citizen in 1789 to the preamble to the Constitution of 1946, have been lavish with generous lists of freedoms or basic principles, but the concept of "basic freedoms" as applied to *voie de fait* (arbitrary administrative acts) is much narrower and is certainly affected by the exceptional nature of the jurisdiction of the courts in this field (3).

We are dealing with "rights recognised and formulated by the public authorities". Now as the Caen court pointed out, "Section 1 of the Act of 10th July, 1976 contains only a statement of principle and a recommendation for whose implementation there are no arrangements in the case of works of the kind now under dispute". Arrangements have since been made, but the action brought subsequently in Paris has not renewed the discussion.

It is clear that instead of sticking to the letter of the law, the courts wished to take a broad matter-of-fact view and took into consideration all the aspects of the problem and had regard to all the precautions taken. For example, the presiding judge of the Lyons TGI found "that it emerges from the extensive research, the enquiries and the opinions obtained in connection with the use of nuclear energy for peaceful purposes in general, and with the construction of the Creys-Malville nuclear power station in particular, that the consultants and

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- (3) The legal force of human rights as defined by the 1789 Declaration and confirmed and expanded by the 1946 Preamble has on the contrary become stronger in administrative case law. But in 1946 everyone was concentrating on rebuilding the country which had been retarded by the crisis in the thirties and partly destroyed by the War, and were asserting the rights of the workers and national solidarity. According to J. Robert, the right to the environment is today at the most a right in the process of emerging.

authorities of all kinds associated with this project have been inspired by concern for safety and public health and even by concern with the quality of life". The Paris TGI in its turn was favourably impressed by the fact that Electricité de France (the State electricity supply undertaking) had postponed loading the Gravelines and Tricastin reactors "in order to give its staff fuller information on the arrangements made for safety, the proper operation of the installations and the reliability of the materials entering into their composition", and that "the value and effectiveness of the measures taken or envisaged" had been "deemed reassuring by the professional bodies (trade unions) directly concerned".

- 1.2 Recourse has also been made to the administrative courts, since administrative law also provides for emergency procedures, "référé" and for the suspension of works

Administrative référé proceedings resemble those in the civil courts, although an administrative judge cannot oppose the enforcement of an administrative decision, but can only order that protective steps be taken or for example that expert reports be obtained as part of the preliminary investigation procedure. It was probably in the hope of introducing expert investigations not provided for by the regulations into the public enquiry procedure that led to référé proceedings being commenced against the orders to open public enquiries into the Creys-Malville and Belleville power stations. The applications were rejected by the Grenoble and Orleans Appeal Courts as serving no useful purpose, especially since the orders concerned were "preparatory" in nature and not regarded as giving ground for complaint, i.e. cannot be challenged before the courts.

In accordance with the principle of the separation of government and the administrative courts referred to in the introduction, review by an administrative court is subsequent to the event and the bringing of proceedings will not in itself normally suspend the enforcement of the administrative act complained of. Nevertheless, as an exception - and excluding matters concerning the maintenance of public order, safety and the public peace - an administrative court may order the enforcement of a decision complained of to be postponed, following a preliminary investigation undertaken as a matter of urgency. Enforcement may only be postponed where there is evidence that it would cause damage which could not in practice be made good by compensation and that there are serious grounds for the application, i.e. a good chance of its being accepted when the substance of the case is dealt with

The existence of the privileged status rule for public works explains why the opponents of nuclear energy have consistently tried to have works pursuant to licences and other administrative decisions stopped while attacking them through other channels. In this context town planning legislation (building permits) is the favourite field for the suspension of works, and the 1976 Act on nature protection, which seems to be the ecologists' bible, penalises the absence of an impact study by postponing works pursuant to decisions which should have been preceded by such a study.

The ecologist movements have won a victory in this field, but a Pyrrhic one. On 28th April, 1978 the Appeal Court ordered the suspension of works under the building permit (under town planning law) for the Flamanville power station, but on 28th December, 1978, after the

Prefect had issued a new permit free from the defects of the first one, the application for a suspension of works under the new permit was rejected on 20th December, 1978 and the Conseil d'Etat took no decision on the appeal

Meanwhile in the interval between the April decision and the new permit, Electricité de France was able to continue work not subject to the building permit, in particular banking-up work along the sea ("public coastland") under a "terracing concession" for which the Caen Appeal Court refused a suspension on 28th June, 1978. Likewise the Orleans Appeal Court ordered a suspension of the building permit for the Belleville-sur-Loire power station on 13th April, 1979, but this decision was reversed by the Conseil d'Etat on 7th December, 1979.

In addition, applications for a suspension of works were rejected in connection with the declarations of public utility covering the Blayais (18th October, 1976) and Creys-Malville (4th May, 1979) power stations

II. ACTION AGAINST SPECIFICALLY "NUCLEAR" LICENCES

In France the overall programming or site-selection stages are concerted with the Ministries concerned and with the authorities of the Région and Département, and they end in government decisions. In contrast to various legal systems abroad, however, these concertation procedures are not at present covered by regulations, but are merely a matter of administrative practice, so that decisions reached cannot be challenged in the courts.

On the other hand, in France the construction and operation of large nuclear installations (5), in particular nuclear reactors, are subject (6) to a project licence granted under a Decree of 11th December, 1963 as amended on 27th March, 1973 and also, where appropriate, to two different kinds of licence for discharging radioactive effluents, depending on whether the latter are liquid or gaseous. Moreover, Decrees embodying project licences endorse administrative practice by not allowing reactors to be loaded or go critical or be put into normal use without ministerial approval of the provisions and final safety reports and compliance with general operating instructions. Such ministerial approval may be considered tantamount to a licence.

No decision has yet been given regarding discharge licences (7), but several cases are pending.

(5) These comprise the "nuclear installations" specified in the Paris Convention of 29th July, 1960 on Third Party Liability in the Field of Nuclear Energy, together with large-scale accelerators.

(6) Without prejudice to the procedures provided for in Articles 37, 41, 78, etc of the Treaty of Rome (EURATOM)

(7) A judgment by the Lille Appeal Court on 10th January, 1980 dismissed an appeal against Orders by the Prefect directing public enquiries into applications for licences to discharge radioactive effluents from the Gravelines power station.

As already stated, Orders directing public enquiries are "preparatory" steps giving no grounds for action and cannot therefore be brought before the Court as being ultra vires ("excès de pouvoir").

On the other hand, project licences have been the subject of significant decisions by the Conseil d'Etat.

The oldest of these dates from 28th February, 1975 and concerned the Fessenheim power station (the Herr, Rettig and Boos case). As in many later cases, the plaintiffs endeavoured to challenge the legality of the Decree granting the licence, arguing that consultations should have been held with bodies such as the Conseil Supérieur de l'Electricité or the European Commission, specified in legislation other than the 1963 Decree under which the contested Decree was issued. The Conseil d'Etat rejected the first decision given in the States of the European Community on the interpretation of Article 34 of the Euratom Treaty.

It found "that it is clear from the provisions of Article 34 that the latter are not applicable to a nuclear installation such as the one licensed ... consisting of a nuclear reactor intended not for experimental purposes but for the industrial generation of electricity"

The Decision went on to say that under certain conditions the local enquiry provided for by the 1963 Decree could be replaced by the enquiry made prior to the declaration of public utility.

As part of its habitual review of the legality (ultra vires) of administrative action the Conseil d'Etat found no evidence before it to warrant the view that the Government had acted on "materially incorrect facts or had committed a manifest error of judgement" - common explanations for ultra vires actions - in issuing the licence complained of.

However, in examining the project licence the Conseil d'Etat implicitly refused to apply the method of weighing advantages and drawbacks which it uses in reviewing a declaration of public utility (see under III below).

More recently, after rejecting about fifty complaints against the Creys-Malville power station, the Conseil d'Etat rendered two important decisions on 4th May, 1979 dismissing complaints by the Département of Savoie and by Messrs. Tazieff, Bombard and Cousteau against the declaration of public utility and project licence for that power station. Leaving aside for the moment the decision on the declaration of public utility, the Decision on the project licence found that the normal licensing procedure had been followed and that the plaintiffs were wrong in maintaining that the Decree complained of did not enable the authorities to enforce compliance by the operator with satisfactory safety regulations laid down by the Decree itself or with later decisions by the competent Ministry. As regards the argument based on Article 34 of the Treaty, this Decision followed the above-mentioned Decision in the Herr Boos and Rettig case, so extending it to cover a breeder reactor.

III. PROCEEDINGS AGAINST DECLARATIONS OF PUBLIC UTILITY (DUPs)

In addition to its original function as the first stage of the expropriation procedure, the enquiry preceding a declaration of public utility (DUP) may, in the case of nuclear operators who, like Electricité de France or the CEA, are legal entities under public law with authority to expropriate, under certain conditions also take the

place of the local enquiry provided for in the Decree of 11th December, 1963, the enquiry provided for in the regulations on installations classified for nature protection purposes, and the enquiry provided for in town planning law on alterations to land-use plans.

Being both the initial procedure and a common feature of several types of official preliminary investigation, the preliminary enquiry may be regarded as the corner-stone of the various administrative decisions required before constructing a nuclear power station.

In these circumstances it is understandable that Decrees declaring power stations or other large nuclear installations to be of public utility should have given rise to considerable litigation. The Conseil d'Etat, competent at first instance in view of the fact that DUPs for nuclear installations are made by Decree, keeps a close check on external or formal legality, e.g. on the membership of the committee of enquiry (Conseil d'Etat, 10th January, 1980, DUP for the Flamanville power station), on the list of communes where the enquiry is conducted, on the contents of the documents made available to the public, on publicity and on the duration of the enquiry (Conseil d'Etat, 4th May, 1979, Creys-Malville cited above).

Special interest attaches to the acceptance by these Decisions that DUP enquiry procedures comply with the law, because, as we have seen, such enquiries are complicated by having to satisfy the provisions of several different sets of regulations.

The main point regarding public utility, however, is that since 1971 the Conseil d'Etat, pursuing the idea already underlying the concept of a "manifest error of judgement" present in ultra vires action and making an administrative decision unlawful, has been comparing the advantages and disadvantages of projects whose public utility is contested. It is clear that even more than in the case of a "manifest error", an assessment of advantages and drawbacks cannot be reconciled with the absence of a review of project desirability which follows from the separation of active administration and the courts, unless the Conseil d'Etat proceeds with caution.

Be that as it may, the Conseil d'Etat is thoroughly familiar with energy problems and has drawn a perfectly clear and firm conclusion from these comparisons. Thus in the Creys-Malville Decision mentioned above it found as follows:

"The imbalance between energy requirements and available resources in France makes it necessary to develop the generation of electric power by different processes from those usually employed, strict rules are imposed on constructors and operators of nuclear installations and precautions have been taken to ensure the safety of the latter, construction of the power station on the site proposed by the project will not result in serious damage to the environment; in these circumstances it does not appear from the application that the project would have economic, financial, safety or environmental disadvantages which would deprive it of its public utility character. .".

After such a view of the project for the prototype fast neutron power station, which was the main target of the action, or of the Eurodif enrichment plant at Tricastin (Conseil d'Etat, 27th July, 1979), the reader will not be surprised to learn that the same favourable conclusion was reached when comparing the advantages and disadvantages

of installations using standard pressurised water reactors (Conseil d'Etat, 27th July, 1979 re the Blayais power station - Conseil d'Etat, 9th November, 1979 re the Gravelines power station - Conseil d'Etat, 10th January, 1980 re the Flamanville power station).

IV. PROCEEDINGS AGAINST LICENCES WITHOUT SPECIFICALLY NUCLEAR ASPECTS

Apart from declarations of public utility, many other non-nuclear regulations have to be complied with in order to construct or operate a large nuclear installation and in particular a nuclear power station. It is not possible to provide an exhaustive immutable list of these regulations or of the licences or declarations they may require, partly because such a list would depend on the particular features of the site chosen (e.g. presence of historical monuments or protected natural sites, purchase of forests, etc.).

However, if procedures connected with a particular aspect of a site are disregarded, there remains a hard core of about ten regulations and licences.

The first group is connected with acquisition of ownership or use of land. If the land required belongs to private persons, it may be acquired by a nuclear operator by expropriation, if he has the necessary powers. We have seen (see Section III above) that Electricité de France has these powers, and under a special Act the NERSA has them, as also does the CEA. There are two stages in the expropriation procedure, one of which is administrative and includes, apart from the declaration of public utility, determining what land to expropriate and listing the interested parties, under transferability orders issued after so-called transferability enquiries.

The second stage is a matter for the civil law because, as we have seen (Section I above), the civil courts are traditionally the protectors of property rights. By order, the courts can transfer ownership and, if the parties do not reach agreement on the amount of compensation, can decide this also. Transferability orders may be challenged before the administrative courts and a court expropriation order be annulled by a Court of Appeal.

Such litigation on expropriation subsequent to a DUP is not common in the nuclear field, which suggests that opposition to it has come more from outsiders than from the inhabitants of the villages around the site. This aspect would probably not be of great interest to readers.

Apart from purchases of forests, for which the procedure varies with their legal status (depending on whether they are "State" forests), the construction of installations for abstracting water from or discharging it into major rivers, which have always been State property, or the reclamation of land from the sea are subject to permits for the precarious tenure of public land or to sea-wall concessions. The sea-wall concession required for constructing the Flamanville power station was contested, but in vain.

Another group consists of the permits required for opening quarries, abstracting sand from the beds of water-courses, making rail and road connections and constructing extra transmission lines for carrying power to and from an installation. There may of course be

legal skirmishing in connection with the various permits granted under this heading. For example, on 8th March, 1978 the Conseil d'Etat annulled a suspension of the Prefect's order approving the route of the transmission line from the power station.

As is well known, nuclear power stations require large amounts of cooling water which is discharged into a river or the sea whenever open-circuit cooling is possible, so that licences to abstract and discharge water have to be obtained following an official investigation which varies somewhat depending on official discussions and public enquiries. The use of cooling towers also requires a certain amount of water and in practice it is always necessary to discharge some waste water, whence the need to obtain official licences in this case also. Such licences may likewise be contested in the courts.

However, the most interesting legal questions have been raised first by the application of town planning, building and construction law, and secondly by the "adoption" by France of the practice of impact studies borrowed from the United States law.

The incomplete account we have given shows that the French system is marked by separate licensing procedures operating side by side, each one being followed by the competent Ministry in drawing up a and applying this or that regulation. However, apart from public enquiries, these regulations, or in their absence administrative practice generally adopted and considerably strengthened in the nuclear field, provide for official consultation in addition to the public enquiry proper in the great majority of the procedures in question. In the official consultation the investigating Minister consults all the other Ministries, administrative departments and sometimes local authorities official, concerned by the project.

This practice makes possible an almost exhaustive and very thorough study of all the aspects of a project and provides a framework for concerted action to mitigate its drawbacks, but at the price of considerable duplication and the absence of overall machinery within the "active" administration to weigh the merits and disadvantages. In the present state of the law, communications between official departments, which establish de facto links in screening applications for the various licences, are not published and cannot be the subject of legal proceedings.

Consequently, the tactics of opponents of nuclear energy have been to try to make court decisions link the different licences together in the hope of being able to prove that one component part is illegal and so lead to the collapse of the whole system.

In this connection the law on town planning, building and construction might seem to be promising terrain. Building permits were instituted long ago by the law on building and construction, but were thoroughly reformed in 1977. Their purpose is to ensure compliance with the rules laid down in town planning documents, namely in outline plans for urban improvement and development (SDAUs), land-use plans (POSS) and urban development plans. Above all they make the submission of applications or the issue of permits subject to investigation under procedures distinct from the permit procedure.

However, there is now abundant case law to show that the legality of building permits is judged entirely by the rules of town planning, and does not depend on detailed compliance with projects

covered by DUPs (Conseil d'Etat, 7th February, 1979 re the Belleville power station). Likewise the construction of a nuclear power station and the permit for putting up the buildings composing it "are governed by separate legislation and independent procedures which do not prevent the building permit being lawfully issued before a licence is given for the large nuclear installation" (Lyons Appeal Court, 25th October, 1979 re the Cruas power station).

The legal certainty which operators derive from the Conseil d'Etat's reaffirmation that the procedures are separate is quite clear

It is also well known what importance ecologist circles attach to the practice of impact studies.

It is therefore not surprising that in their litigious offensive one of their main weapons should have been a demand that the impact studies included in the various applications for licences should conform to the Act of 10th July, 1976 on nature protection.

We leave aside those decisions which ignore the argument based on the absence of impact studies from applications for licences made before the inclusion of any impact study became compulsory (October, 1977) and also the decisions concerning the question of publishing such studies.

The decisions concerning the content of impact studies seem to us more interesting (Lyons Appeal Court, 25th October, 1979 re the Cruas power station, and Conseil d'Etat, 7th February, 1979 re the Belleville power station).

According to the first of these decisions it is for the administrative court "first, to verify whether the regulations concerning the content of the impact study have been complied with (analysis of initial state of site, study of changes made by the project, and measures envisaged for preventing or offsetting effects harmful to the environment), and secondly to check that the building permit issued on the strength of the findings of the study is not based on materially incorrect facts or a manifest error of judgement"

CONCLUSION

Some legal commentators (see J. Ph. Colson and A. Bockel) seem to deplore the "conventional" approach adopted in cases concerning licences for nuclear power stations and feel that the Conseil d'Etat could have been bolder or more original.

Apart from the reasons we have given connected with the traditional French view of the jurisdiction of the courts over acts of government and the functioning of the "public services", the implicit refusal to develop case law in a number of possible directions in disputes resulting from implementation of the nuclear programme seems to be due to the Conseil d'Etat's conviction that in present circumstances France's nuclear policy is sound, i.e. that the balance of advantages and drawbacks is positive.

It would be presumptuous to predict future developments in this field. The strict check on legality kept by the courts might reveal that this or that administrative decision was wrong, especially as the opponents of nuclear energy are perfecting their arguments as

each case is tried, or are changing the direction of their attack in the hope of eventually finding a weak spot in the highly complex mechanism of licences and regulations which constricts the construction and operation of large nuclear installations. It is also possible that for a time the legal emphasis may shift towards obstructing public enquiries by intimidation, i.e. to the field of criminal law, and towards a demand for non-litigious administrative procedures to be reformed by legislation or administrative regulations.

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STANDARD RULES FOR LIABILITY AND COVER
FOR NUCLEAR INSTALLATIONS*

J. K. Pfaffelhuber and B. Kuckuck
Federal Ministry of the Interior
Federal Republic of Germany

I. THE PROBLEM

The present liability ceiling of DM.1 billion per cases of damage from a nuclear installation provided for by the German Atomic Energy Act is illogical. Paradoxical though it may seem, it is in contradiction with the high safety standards of our nuclear power stations. On the other hand, technical installations will never be quite 100 per cent safe.

The protection of our population and the liability of those who cause damage should no longer be limited to the current ceilings for liability and cover. Those whom the citizen regard as fortuitous victims of reactor incidents are entitled to full compensation. Limited protection in case of nuclear disasters - which we hope will never occur and we believe that the safety margins in German nuclear installations should guarantee this - is not in keeping with the social system in the Federal Republic of Germany.

Anyone who is in favour of energy supplies from nuclear power stations should therefore be in favour of full financial compensation for his fellow citizens in case of nuclear damage.

II. REASONS FOR MAKING CHANGES IN LIABILITY AND COVER

1. Legal situation after "Harrisburg"

The near-catastrophe at Harrisburg in the United States has made all Americans aware of the great danger of reactor incidents

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Note by the Secretariat: This Article as well as the following Article by Mr. Breining are extracted from papers presented at the Sixth German Symposium on Nuclear Law held in Münster in 1979. They illustrate the current debate in the Federal Republic of Germany concerning the evolution of the nuclear third party liability system at a time when the revision of the Paris Convention and the Brussels Supplementary Convention draws attention to this question.

(a) In spite of our great distance and different circumstances from Harrisburg, the events there have started a movement in the Federal Republic of Germany towards a critical stock-taking and a review of the arrangements for taking adequate precautions in respect of German nuclear power stations. The review could not be confined to existing arrangements for compensation for damage. The breakdown of safety precautions at Harrisburg must be rated as the first serious reactor casualty involving liability in nuclear law. Apart from serious damage to the installation, there was also damage to third parties; as a result of the advice of the Governor of the State of Pennsylvania to evacuate pregnant women and small children within a five-mile radius, United States insurers started making payments on account as from the second day after the accident. Over 3,000 people were paid a total of some US\$2 million forthwith and, as far as we know, a compensation fund of US\$80 million has been set up to meet future claims.

We fully realise that in 1975 the Federal Republic of Germany took its first big step towards improving protection for victims by passing the amendment to the Atomgesetz (Atomic Energy Act) concerning liability, but that does not mean that we should still boast about what an excellent liability system we have. Although we are in the van of progress, we have little cause for self-satisfaction.

(b) For example, various countries (Japan and the German Democratic Republic) have no ceiling for liability.

United States legislation on nuclear liability, the so-called Price Anderson Act, at present provides for liability payments up to a ceiling of US\$560 million, but Congress is demanding radical improvements in the legislation and liability situation as it affects the population. The financial ceilings are said to be "unfair" to all parties, because they are not in the true interest either of the population or of the nuclear industry (1).

In a neighbouring country, Switzerland, whose legal tradition is naturally very close to ours, a Bill is being discussed which proposes (2) that the owner of a nuclear installation should bear unlimited liability in accordance with the general principles of the law on compensation for damage. A victim would have a direct claim against the insurer. Private third party insurance cover would total Sw.Frs.1 billion, of which at least 200 million would be covered by the insurer and the rest by the Swiss Federal Government. For this the Federal Government would collect contributions from the owners of nuclear installations and holders of transport permits, which would be calculated on the actuarial principles for premiums and paid into an interest-bearing fund. The Federal Government would continue to make payments in case of major damage.

These methods of making improvements should also be discussed in the Federal Republic of Germany, if it is intended to treat standard rules seriously.

(1) See Atomic Energy Clearing House, Vol. 25, No. 29, 16th July, 1979, page 48 ff.

(2) The updated version of the Swiss Bill is reproduced in the Supplement to this issue of the Bulletin (note by the Secretariat).

2. Shortcomings of the current Atomgesetz (Atomic Energy Act)

German nuclear liability legislation is based on the provisions of the Paris Convention on Nuclear Liability of 1960, as amended in 1964, and the Brussels Supplementary Convention of 1963, as amended in 1964.

(a) The Swiss Expert Committee comes to the conclusion that "there is no sufficient justification, either legal or political," (3) for the financial ceiling on liability.

When the two European Conventions were ratified, we did indeed put a higher value on the advantage of unified legislation, international solidarity and easier decisions on transfrontier damage, but it must be admitted that we share the criticisms made by the Swiss in many respects

(b) For example, our criticism of the OECD Conventions was the reason why the liability ceiling in the Federal Republic was raised to DM.1 billion, prescription was extended from ten to thirty years and the damage due to a grave natural disaster excluded by Article 9 of the Paris Convention was included under government cover.

After Harrisburg it is true that preliminary agreement was at last reached in Paris on compensating for recent inflation and increasing the Brussels scale by a common correction factor of 2.5. This could mean joint government payments of up to DM.750 million per incident in expensive cases.

(c) But even this financial correction is too uncertain for us as regards its time-scale and marks no progress for the country. If the situation is to be properly regularised, the liability ceiling must be removed and the responsibility of those who cause incidents must be revised. For this purpose the Federal Minister of Interior has worked out preliminary practical suggestions with other Departments and also with electricity supply undertakings and insurance companies.

There are many reasons for removing the limit on liability and the arguments against doing so are weak.

- (1) It is agreed that the already high safety standards of reactors in Germany should always have top priority. On the other hand, the part now published of the German study on risks recalls the conclusions of the United States Rasmussen Report, namely that reactors cannot be absolutely safe for ever and that, however unlikely a major reactor incident may be, if it does occur, it will cause immense damage both immediately and later.

(3) Explanatory Report on the Swiss Bill, page 20.

(11) Meanwhile, reactor safety is so good that reactor operators and the nuclear industry no longer need the protection of limited liability which in 1960 was still more appropriate for small reactors. This privileged treatment of the nuclear industry, which was reasonable at that time, is today an anachronism because the main purpose of nuclear legislation has become to afford protection instead of to promote development. It puts nuclear energy undeservedly in the shade.

(111) There is a constant tendency in German insurance legislation to remove legal limits on compensation, as has already happened in the case of damage caused by water, and to apply the normal regulations regarding unlimited payment for damages. Consequently the remaining limits on liability in the "Gesetz zur Änderung schadenersatzrechtlicher Vorschriften" (Act to amend the regulations on legal compensation for damage) of 1st January, 1978 are expressly understood by Parliament to be temporary preparatory measures (4).

(iv) Removing the ceiling on liability in connection with nuclear energy, to which public opinion is sensitive, would at last relieve us of the insoluble problem of finding a legally acceptable formula under Section 35 of the Atomgesetz (Atomic Energy Act) for distributing the financial burden in case of a nuclear catastrophe.

(v) It must be remembered that the concept of a social welfare State does not acknowledge an arbitrarily fixed ceiling for the protection of victims. In the case of a disaster the State still has an unwritten obligation to give its afflicted citizens care and assistance up to a limit which, depending on circumstances, need not stop at DM.1 billion.

(vi) If those who cause incidents were obliged to give higher financial guarantees, the State budget would be relieved, so serving the interests of financial policy.

In practice the present indemnity obligation limits the risk born by the owner of a nuclear installation to claims for damages for which he can obtain cover on the insurance market. Ten-year old damage, genetic damage and damage following natural disasters, which insurance companies, despite our efforts to the contrary, unfortunately still refuse, are now covered by the State from nil upwards as a precaution and in serious cases are made good by it.

Such privileges are unhealthy, because in the long run they may weaken the sense of responsibility of operators of nuclear power stations, whereas a full sense of responsibility would help to make them act more carefully and reliably and so avoid mistakes.

(vii) We cannot afford mistakes in view of the magnitude of the risks from nuclear power stations. We believe that managers of energy supply undertakings know that an incident on the Harrisburg scale in the Federal Republic of Germany might mean the end of nuclear power in our country's energy policy.

(4) See the report by the Rechtsausschuss (law committee), BT-Drucks, 8/562, page 12.

III. SUGGESTIONS FOR CHANGES IN LIABILITY AND COVER

In view of these circumstances the existing ceiling on liability cannot help to make the public accept nuclear energy, so that early action is required to regularise liability and cover under the Atomgesetz (Atomic Energy Act).

1. International aspects

As already mentioned, the Federal Republic of Germany is a Contracting Party to the Paris and Brussels Conventions, so that standard rules must take account of international law and foreign considerations.

(a) It is true that the Paris Convention sets a financial limit to liability and assumes a balance between liability and cover, so that when the State intervenes, according to the letter of the Convention a liability ceiling of, say, DM.500 billion would be in order, whereas unlimited liability would not. The spirit of the Convention makes it clear that such differentiation is absurd.

It was accordingly a sign of the changed spirit of the Convention on liability, when there was no direct, reasoned opposition from any other Signatory State to the German assessment of the Swiss Bill to the effect that it could not reasonably be imagined how improved protection for victims might infringe the Convention on liability and protection for victims. All countries are therefore seeking ways of enabling Switzerland, if it wishes, to become a Party to the Convention.

(b) We think that the spirit of the Convention sets a new limit.

The spirit of the Convention on liability should prohibit the liability risk for owners of nuclear installations from being made economically unbearable. Here lies the rub, namely how to determine and make proper use of the financial limits to the responsibility of those causing damage, and how to fit the special regulations of different countries better into the international compensation system.

2. Possible ways of providing unlimited protection

Liability arising from unforeseeable causes, i.e. strict liability, must be retained as the basis for protecting victims, as must the devolution at law of liability upon owners of nuclear installations.

If a system of claims for compensation is adopted, there will still be a financial ceiling on owner liability and the State will pay compensation directly for damage exceeding the ceiling amount. This solution should fit the Convention quite well, but would leave the ceiling on private responsibility too low.

Nor is there much to be said for an unlimited liability for damage in excess of the limited risk liability when that damage is caused by fault. Dangerous installations are the origin of liability, so that considerations of fault in cases of nuclear catastrophes may well play no part because fault cannot be proved.

(b) To round off these remarks on legal liability one should therefore take a look at the possibilities of obtaining private cover. The best liability system is useless unless crisis-proof funds are available quickly in case of need.

Insurance companies, which already provide cover up to DM.200 million for pharmaceuticals and write billions of business in the much more hazardous field of non-life insurance, could probably cover DM.500 million-worth of third party liability risks today, but account should be taken of the total of accumulated premium payments.

Energy supply undertakings, which have hitherto jointly covered the first DM.300 million in excess of the total written directly by insurers, might now extend their cover to DM.1 billion.

(c) Beyond that nothing can probably be done without government cover. In case of disaster where the State steps in, the joint responsibility of taxpayers must be invoked.

On the other hand, government risk-coverage must not be free of charge in the case of smaller claims. If the government provided a further DM.1 billion cover, one might envisage

1. obliging operators to pay insurance contributions to the State and setting up an interest-bearing fund, as is done in Switzerland up to a ceiling of Sw.Frs.1 billion;
2. obliging reactor operators to contribute while still compensating for damage up to DM.1 million, so that government compensation payments would be reduced accordingly on the United States model;
3. entitling the government, after paying compensation, to recover it from the responsible owner up to a specified amount or in certain cases.

IV. FINAL COMMENTS

Where there is intent or gross negligence, the right to recover a limited sum should meet the case, but this would mean taking out further additional insurance or building up reserves, so that it would probably be best in the long run to institute a right of recourse with a certain repressive character and increased individual responsibility and to link it with preventive insurance premium payments into a government fund, as is planned in Switzerland.

The principles and details of these arrangements should be discussed with all the parties concerned.

REFORM OF LIABILITY IN NUCLEAR LAW*
(UNLIMITED LIABILITY DOES NOT AUTOMATICALLY
CREATE UNLIMITED COVER)

W. Breining
Allianz - Versicherungs - AG, Munich

INTRODUCTION

The suggestions which are being made for changes in liability in nuclear law are clearly prompted by what happened at Harrisburg and it is understandable if in this connection not only questions of safety are being discussed, but also questions of liability.

The German insurance industry is ready for such discussions. It has already made a decisive contribution towards covering nuclear risks, first by underwriting the first tranche of DM.200 million through the Deutsche Kernreaktor-Versicherungsgemeinschaft (DKVG), i.e. the association of German nuclear reactor insurers, and then, after increasing its liability to DM.1 billion, by underwriting the second tranche of DM.300 million in advance under a co-insurance arrangement in close co-operation with the electricity supply industry.

Compared with other countries the Federal Republic of Germany is not only in the van of progress, but the German insurance industry is also in the lead with its commitments. This fact must be remembered if new discussions are starting. A further point is that the German insurance industry, like that of all other countries, belongs to an international pool without which the insurance of nuclear risks could not be contemplated. The enormous capacity required in the nuclear sector for dealing with non-life and third party risks can only be provided by a world-wide pooling and reinsurance system.

At the present time German insurance companies can contribute only a few general comments on what has been said so far.

LIABILITY AND COVER

Unlimited liability is primarily a matter for the party liable, but of course it is more or less directly connected with the possibility of obtaining cover for it.

Apart from the fact that the Swiss idea of unlimited liability in nuclear law is in conflict with the Paris Convention and the Brussels Supplementary Convention, that idea has not yet been put into effect in Switzerland either. There is also the question whether the increased

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security given by unlimited liability is not more apparent than real. Unlimited liability does not automatically create unlimited cover. If the principle observed hitherto of a balance between liability and cover were abandoned, the protection of victims would not be improved. Where potential damage ceases to be tangible, measurable and manageable, a situation arises which can no more be made to fit liability standards than can a "national catastrophe". This is also the idea underlying the system embodied in the Paris Convention and the Brussels Supplementary Convention, namely limitation of liability as far as is practicable and government compensation for damage above that limit caused by disasters. This system is also the goal of the new Netherlands legislation, namely a liability limit for the operator of Fl.100 million and State cover of up to Fl.1 billion.*

Consequently the insurance industry can only recommend that the extent of liability should be decided by risk concepts which can be envisaged and calculated. It must be said quite clearly that with the best will in the world the insurance industry cannot provide unlimited cover. There are many reasons for this, especially the fact that there is a wide gap between what is promised and what can be done, so that the ability demanded by the law to honour insurance contracts at all times would be most seriously jeopardised, which would inevitably prejudice other branches of insurance.

COVER CAPACITY

If then the insurer cannot cover unlimited liability, the old question of capacity becomes acute. As mentioned at the start, this is a question for the world insurance market in which third party liability capacity and non-life capacity must be considered together. At present non-life insurance capacity is about DM.750 million and third party liability capacity is about DM.200 or 300 million. Whether these capacities can be increased will have to be seen at the appropriate time. The following considerations also apply.

International capacity is built up because separate countries have requirements. Only if certain amounts are required in the insurer's own country will he be ready to do something on the same scale "for others". Here our high level of liability compared with all other countries is already a disadvantage for our third party liability capacity. If we draw still further ahead of them, the capacity problem is likely to become more difficult.

This is also the reason why non-life capacity is higher than third party liability capacity. The extremely high values to be covered are found in all the countries concerned and this creates national and consequently international capacity. In addition, not only are nuclear risks covered, but also other risks such as fire, machinery and so on. This necessary protection serves to safeguard both the electricity supply industry and those who operate it, and also ensures that electricity supplies will be maintained in spite of the occurrence of damage. Nor

* Note by the Secretariat: The Netherlands Act of 17th March 1979 concerning third party liability for nuclear incidents came into force on 28th December 1979. It is reproduced in the Supplement to Nuclear Law Bulletin No. 24.

should it be forgotten that non-life insurance plays an important part in the granting of investment loans, as well as helping to protect investors. Consequently non-life capacity and third party liability capacity, for which there are different underwriting systems, are not simply interchangeable.

In this connection it should be mentioned that the electricity supply industry still bears high risks of its own, because the value of its installations is far above the insurance capacity limit and it also has to bear the risk of breakdowns.

Nor can the capacity problem be solved by keeping a limit on unforeseen risk liability and adding unlimited liability for damage caused by fault. Apart from the questions of principle which this would raise, liability for damage caused by fault would be as difficult for insurers to cover as unforeseen risk liability. The greater the damage and the more persons affected by it, the more difficult is it for individual victims to prove that a fault has been committed. The courts would have to come quickly to the aid of the injured parties and treat liability for damage caused by fault as equivalent to unforeseen risk liability by shifting the burden of proof and other means. It would therefore be unrealistic to assume that a liability capacity for damage caused by fault could be built up in addition to an "unforeseen risk capacity".

THE STATE AS INSURER?

If then the capacity of insurers, including their co-operative efforts with the electricity supply industry, is not sufficient to cover liability in full, the only normal remedy will be the usual model, which is also international, namely

- to make full use of capacity
- and also for the State to hold operators safeguarded.

The suggestions made in Switzerland in this connection, seem very problematical and have not yet been sorted out or fully discussed, and are to the effect that actuarially calculated contributions should be collected for holding operators safeguarded. The State should not act as an insurance company, especially as it certainly does not intend to assume all the functions of one. This would mean, among other things, having its own machinery for settling claims, to mention only one of the not inconsiderable consequences.

EXTENSION OF COVER PERIOD

Where the discussion deals with extending the cover period of ten years following the occurrence of a nuclear incident, it must first be established that settlement of claims for damage is practicable and workable. This is only so, if there is enough time to ascertain and evaluate the facts. Nor must the examination of causal relationships be prevented by shortage of time and other environmental influences. This applies especially to problems of genetic damage. Moreover, the international reinsurance market is not at present able or prepared to go beyond the ten-year period, which is in any case laid down in the Paris Convention. In Japan also, private insurance companies limit their cover to ten years.

Furthermore, an inevitable result of lengthening this period would be that insurers would be allowed to keep reserves for many years which would be recognized for tax purposes, a situation which the present system could not cope with.

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Gerhard Meyer-Wöbse, Rechtsfragen des Exports von Kernanlagen in Nicht-kernwaffenstaaten, Studien zum internationalen Wirtschaftsrecht und Atomenergierecht, Band 62, Carl Heymanns Verlag, Köln, 1979
[Legal questions concerning the export of nuclear installations to non-nuclear-weapon States, by Gerhard Meyer-Wöbse, Volume 62 of the Studies in International Economic and Atomic Energy Law].

The author treats a problem which has become the subject of extensive discussion during the past years: the export of nuclear installations to non-nuclear-weapon States within the meaning of the Treaty on the Non-Proliferation of Nuclear Weapons (NPT). Despite its somewhat restrictive title, the study deals also with the export of nuclear material, equipment and technology.

The author starts with analysing the problems under international law, in particular those raised in connection with the NPT. He first considers nuclear transfers between States party to NPT, and especially the export of "sensitive" materials, equipment and facilities and its relation to Article IV, paragraph 2 of the NPT according to which the parties undertake "to facilitate, and have the right to participate in the fullest possible exchange of equipment, materials and scientific and technological information for the peaceful uses of nuclear energy".

The second set of cases examined concerns the export from a State party to NPT to a non-contracting State. Finally, nuclear transfers between States not party to NPT are reviewed. All three scenarios are illustrated by numerous examples, such as the agreement between the Federal Republic of Germany and Brazil. The author devotes particular attention to the "Guidelines for nuclear transfers" and the "trigger list" agreed by supplier countries which he qualifies as measures of political co-ordination on the basis of reciprocity which do not constitute an international treaty.

In the second chapter of his book, the author describes and discusses the regulation of nuclear exports in the Federal Republic of Germany (non-nuclear-weapon State party to NPT), the United States of America (nuclear-weapon State party to NPT), and France (not party to NPT).

The last chapter is devoted to export agreements under private (international) law which constitute the original legal source for nuclear transfers under the umbrella of international obligations between States. Of particular interest in this context are questions related to the legal qualification of "letters of intent", the choice of law, settlement of disputes, liability, and financing.

Das Strahlenschutzrecht in den Mitgliedstaaten der Europäischen Gemeinschaften by Werner Bischof and Norbert Pelzer, Vol. I: Belgien, Luxemburg, Niederlande, Baden-Baden, 1979, 176 p.

This book is the first of three volumes which will provide a comparative overview of radiation protection law in the Member States of the European Communities. The first volume covers Belgium, Luxembourg and the Netherlands and describes the relevant legal systems in these three countries, including the licensing procedures for nuclear installations.

Bindungs- und Präklusionswirkung von Teilentscheidungen nach BImSchG und AtG by Ulrich Büdenbender and Ulrich Mutschler, Köln etc. 1979, 146 p.

This book deals with a special procedural problem in connection with the granting of partial decisions in the licensing procedure for nuclear installations. The problem described is of great importance in German lawsuits in connection with the licensing of nuclear power plants.

• *United Kingdom*

Summary of the law relating to atomic energy and radioactive substances as at March 1980, D. F. Sim and K. J. S. Ritchie, 21 p.

This Summary brings up to date a summary of the United Kingdom's legislation on atomic energy published in recent years (see Nuclear Law Bulletin No. 24) and reviews the main texts in this field.

The Summary also contains information on international texts on the subject: conventions and regulations on the transport of nuclear material, conventions on nuclear third party liability, environmental protection etc.

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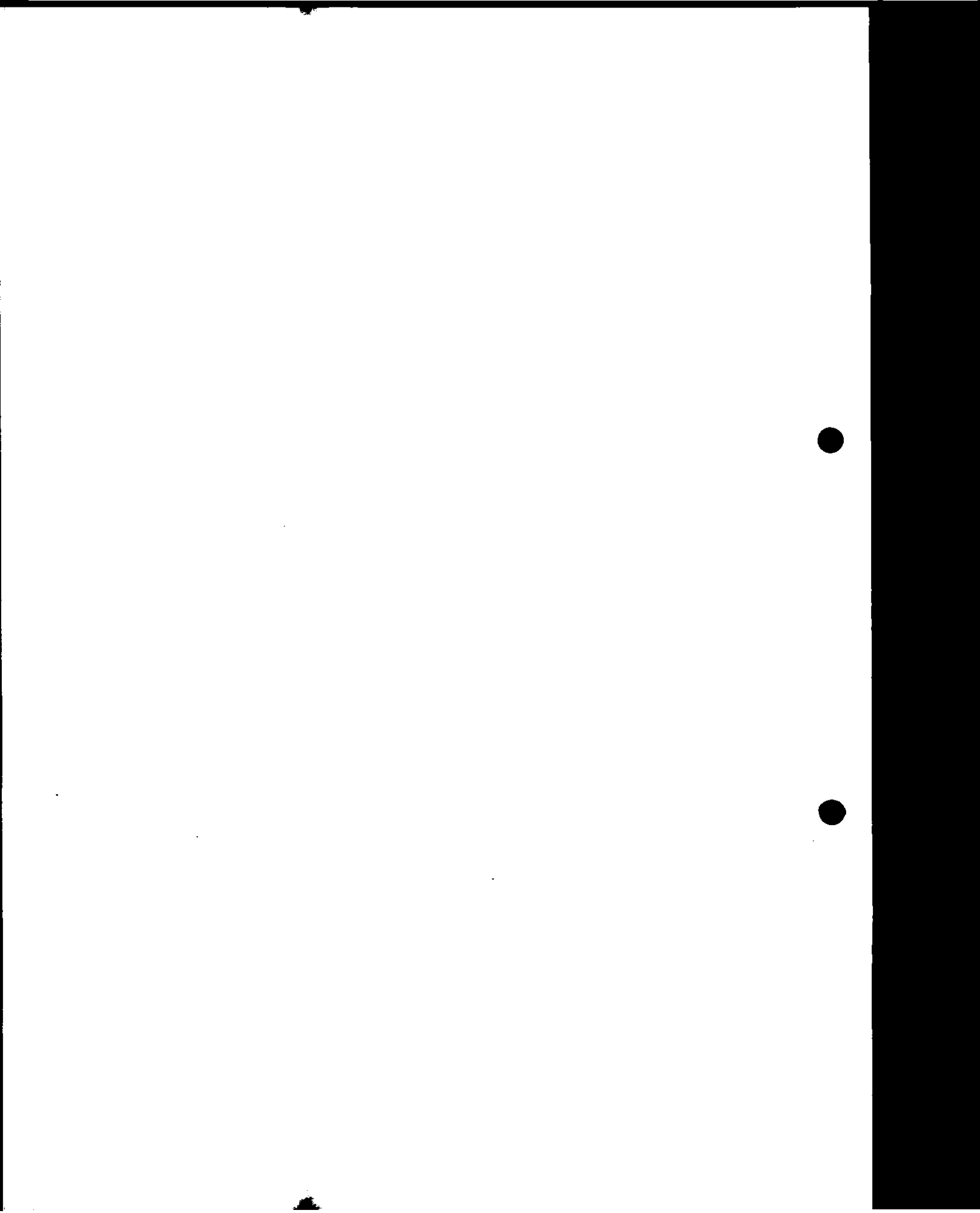
Bulletin

S U P P L E M E N T T O N ° 2 5

S W I T Z E R L A N D

BILL ON

THIRD PARTY LIABILITY IN THE NUCLEAR FIELD (LRCN)



S W I T Z E R L A N D

BILL ON

THIRD PARTY LIABILITY IN THE NUCLEAR FIELD (LRCN)*

The Federal Assembly of the Swiss Confederation,
having regard to Articles 24^{quinqüies}, 64 and 64^{bis} of the Constitution ;
having regard to the Message of the Federal Council of the 10th December,
1979,

enacts :

CHAPTER I

General provisions

Section 1 Définitions

1. By nuclear energy is meant any form of energy released during nuclear processes.
2. Nuclear fuels shall be deemed to be fissile materials including uranium in the form of metal, alloy or chemical compounds, plutonium in the form of metal, alloy or chemical compounds and any other fissile material designated as such by the Federal Council.
3. Radioactive products or waste shall be deemed to be radioactive materials produced, or having become radioactive, through exposure to radiation resulting from the production, use, storage or reprocessing of nuclear fuels ; exceptions, however, are radioisotopes which are used or intended to be used, outside a nuclear installation, for industrial, commercial, agricultural, medical or scientific purposes.
4. Nuclear substances shall be deemed to be nuclear fuels, and radioactive products and wastes.

* Unofficial translation by the Secretariat.

5. Nuclear installations shall be deemed to be installations, used for producing nuclear energy or for producing, using, storing or reprocessing nuclear substances.

6. The operator of a nuclear installation shall be deemed to be the person who builds such an installation on his own account, operates or controls it in whatever capacity, or a person who, without the consent of the responsible authorities, has given up controlling it.

7. Damage of nuclear origin exists when radioactive, toxic or explosive properties or any other dangerous properties of nuclear substances bring about the death or impair the health of persons or cause material damage.

Section 2 Powers of the Federal Council

1. The Federal Council may define other terms used in this Act.
2. The Federal Council may declare that the provisions of this Act do not apply to low-radioactivity nuclear substances.

CHAPTER II

Third Party Liability

Section 3 Principle

1. The operator of a nuclear installation shall be responsible, without limit, for third party liability in respect of damage of nuclear origin caused by nuclear substances in his installation.

2. Similarly, the operator of a nuclear installation shall be responsible for third party liability in respect of damage of nuclear origin caused by nuclear substances coming from his installation and which, at the moment when the damage was caused, had not yet been taken over by the operator of another nuclear installation. Nuclear substances shall be deemed to have been taken over at the moment when they cross the boundary around the other nuclear installations or a boundary fixed by contract outside Swiss territory.

3. When the operator of a nuclear installation receives nuclear substances from abroad, that operator shall bear third party liability for damage of nuclear origin taking place in Switzerland caused by these materials during their carriage to his installation. His right of recourse against the foreign shipper is not affected.

4. If the installation does not belong to the operator, the owner shall bear third party liability jointly with the operator.

5. During the carriage of nuclear substances in transit through Switzerland, the holder of the transport licence shall bear third party liability in the event of damage of nuclear origin caused by such substances. If he has no domicile in Switzerland he shall, by written statement, submit himself to the jurisdiction of the Swiss courts and elect domicile in Switzerland with regard to any cases based on this Act.

6. Persons other than those listed in paragraphs 1 to 5 above shall not bear third party liability for damage of nuclear origin. Persons bearing third party liability by virtue of international conventions shall enjoy a right of recourse against the person so liable under this Act.

Section 4 Exoneration

The operator of a nuclear installation or the holder of a transport licence shall be released from his third party liability only if he proves that the injured party has caused the damage intentionally or by gross negligence.

Section 5 Recourse of the person bearing third party liability

The person bearing third party liability under Section 3 shall have right of recourse only against such persons :

- a) who have caused the incident intentionally or by gross negligence ;
- b) who have stolen or received the nuclear substances causing the accident ;
- c) who have granted him right of recourse by contract, although such a clause cannot be invoked against the employee of the person bearing third party liability unless the former causes the damage intentionally or by gross negligence.

Section 6 Damages, including damages for moral prejudice

1. The nature and amount of damages including those for moral prejudice shall be established in accordance with the general principles of the law on liability concerning illicit acts unless otherwise provided by this Act. Section 44, paragraph 2, of the Code of Liabilities shall not apply.

2. In general, compensation shall be granted in the form of regular payments.

3. Where the victim of the damage is in receipt of an exceptionally high income the judge may, taking all the circumstances into account, reduce the amount of compensation on a fair basis.

Section 7 Agreements

1. All agreements which exclude or restrict the third party liability arising out of this Act shall be deemed to be null and void.

2. Any agreements specifying manifestly inadequate compensation may be challenged within three years of the date of their conclusion.

Section 8 Insurance against incidents

1. Injured parties insured with the National Insurance Fund against accident risks shall retain their rights under this Act. Section 129 of the Federal Act on Sickness and Accident Insurance is not affected.

2. Payments to the injured party under a non-compulsory insurance policy, the premiums for which have been wholly or partly paid by the operator or the holder of a transport licence alleged to be liable shall be deducted from the amount of the damages payable in proportion to the share of premiums paid by him save where otherwise provided by the contract of insurance.

Section 9 Limitation and extinction of claims

1. Proceedings under this Act shall be statute barred three years from the date on which the injured party became aware of the damage and of the identity of the person assuming third party liability or cover. The right to take action shall be extinguished, with the exception of actions relating to deferred damage within the meaning of Section 12, if no proceedings are brought within a period of thirty years following the incident. When the damage is due to prolonged effects, the above periods shall begin from the moment when these effects cease.

2. As regards the right of appeal the three year period shall begin from the day on which the person enjoying that right becomes aware of the amount of the payments that he has to make.

3. Where the state of health of the injured party deteriorates after the judgment or the signing of the settlement, or if new facts or evidence come to light, application may be made for revision of the judgment or amendment of the settlement within three years of the date on which the injured party became aware of the deterioration in his state of health but in no case later than thirty years after the incident.

4. An interruption of the period of limitation for the person alleged to be responsible shall be applied equally to the insurer and the Confederation.

CHAPTER III

Cover

Part 1 Private Insurance

Section 10

1. A person bearing liability under the provisions of this Act shall, in order to cover the insured risks of his third party liability, take out with an insurance company authorised to operate in Switzerland, insurance of at least Frs. 200 million per nuclear installation, plus at least Frs. 20 million for interest payable and procedural costs relating to the payments. For the transit of nuclear materials through Switzerland, the amount insured for each transport operation shall be at least Frs. 50 million plus at least Frs. 5 million for interest payable and procedural costs.

2. Where the insurance marked offers higher cover on acceptable terms, the Federal Council may, by Order, increase these minimal amounts.

3. The Federal Council shall, by Order, define the risks that may be excluded from private third party insurance cover.

Part 2 Cover by the Confederation

Section 11 Insurance

The Confederation shall cover the person bearing third party liability for a nuclear incident up to an amount of Frs. 1 billion per nuclear installation or transport operation, plus Frs. 100 million for interest payable and procedural costs, to the extent that the damage is not covered by private insurance within the meaning of Section 10, paragraph 1.

Section 12 Deferred damage

Up to the figure of the amount specified by Section 11, the Confederation shall also cover nuclear damage reparation for which cannot be demanded from the person bearing third party liability because the thirty year period (Section 9, paragraph 1) has run out.

Section 13 Other cases

1. Up to the figure of the amount specified by Section 11 the Confederation shall also cover nuclear damage :

- a) if it is impossible to establish who bears third party liability ;
- b) if the damage concerned is not covered or if the insurer, through insolvency, is not in a position to honour the cover and if the person bearing third party liability is also incapable of doing so ;
- c) if the incident has taken place in another country and if the party injured in Switzerland is unable to secure compensation in compliance with this Act.

2. When the Confederation makes payment under paragraph 1 above, it shall enjoy a right of recourse against the person bearing third party liability. It may exercise any right of action open to the person held liable.

Section 14 Contributions by persons bearing third party liability

1. For the purpose of performing the obligations imposed on it by Sections 11 and 12, the Confederation shall collect contributions from operators of nuclear power stations and holders of transport licences the amount of which shall be calculated in such a way as to comply as far as possible with the principle of covering costs but which shall not exceed three times the private third party liability insurance premium calculated with the object of providing cover up to a figure of Frs. 200 million.

2. Within these limits, the Federal Council shall establish the amount of the contributions.

3. The administrative service specified by the Federal Council shall fix and collect contributions. Its decisions may be challenged in the Federal Court by way of proceedings under administrative law.

Section 15 Nuclear damage fund

The Confederation shall set up a fund into which shall be paid the contributions collected under Section 14 and the interest they earn.

Part 3 Other provisions concerning insurance

Section 16 Exemptions from the obligation to be insured

1. The Federal Council may exempt the person bearing third party liability from the obligation to be insured with a private insurer if that person supplies equivalent guarantees for the injured parties in another form.
2. The Confederation is not subject to the obligation to be insured for the nuclear installations of which it is the owner.

Section 17 Restoration of full cover

1. If the insurance company or the Confederation acting as insurer makes payments or constitutes reserves following an incident for which damages have to be paid, the cover is reduced by that amount. When the payments or reserves amount to one-tenth of the cover, the insurer shall inform the insurance policy-holder and the responsible Federal administrative service.
2. In that case, the insurance policy-holder shall take out additional insurance in order to reconstitute the full initial cover. This additional insurance, however, will cover only incidents occurring after its entry into effect. In cases of doubt the responsible authority shall decide as to the obligation on the insurance policy-holder to increase his cover in the light of the amount of reserves built up.
3. If an amount has been reserved to settle cases arising before the entry into effect of the additional insurance and has not been drawn upon, it cannot be used to cover damage occurring after the entry into effect of the additional insurance.

Section 18 Direct action, exceptions, rights of action

1. The injured party may bring direct action against the insurer and against the Confederation acting as insurer within the limits of the amount covered by the insurance.
2. Exceptions contained in the contract of insurance or in the Federal Act on contracts of insurance shall not be invoked against the injured party.

Section 19 Right of recourse of insurers

1. The insurer and the Confederation have a right of recourse against the insurance policy-holder to the extent that they are empowered to refuse or to reduce their payments under the contract of insurance or the Federal Act on contracts of insurance. They can enforce their right of recourse only to the extent that they will not in so doing prejudice the interests of the injured parties.

2. The insurance company or the Confederation acting as insurer shall be entitled to exercise the rights of recourse of the person liable only to the extent that this does not harm the interests of the injured parties.

Section 20 Suspension and cancellation of the insurance

The insurer shall inform the competent authority of the suspension or cancellation of the insurance. Such suspension or cancellation shall become effective only one year after receipt of the notification by the insurer, save where such insurance is replaced by another beforehand.

CHAPTER IV

Procedure

● Section 21 Conservation of evidence

1. After an incident of a certain gravity, the Federal Council shall order an enquiry. It shall, by published notice, invite all persons who may have been exposed to radiation or may have suffered material damage to make themselves known to the body designated by the Federal Council forthwith but at the latest within the three months following the publishing of the notice.

2. The published notice shall state that failure to comply with the obligation to make oneself known may subsequently make it more difficult to establish proof that there is a connection between any damage or injury and the incident that has occurred.

Section 22 Forum

1. If the incident is caused by a nuclear installation, the highest civil court in the Canton where the nuclear installation is situated has sole jurisdiction with regard to proceedings based on this Act. That court shall judge as sole Cantonal jurisdiction.

● 2. If the incident is caused during carriage of nuclear materials, proceedings shall be brought before the highest civil court in the Canton where the event causing the damage took place. When the place of the incident cannot be determined legal proceedings shall be brought :

- a) before the civil court of the Canton where the nuclear installation is situated if the operator of a nuclear installation bears third party liability ;
- b) before the highest civil court in the Canton where the holder of the licence is resident or has elected domicile if the holder of a transport licence is alleged to be liable.

3. An action under Sections 12 and 13 brought against the Confederation shall be brought before the highest court of the Berne Canton unless one of the fora specified in paragraphs 1 or 2 above exists.

4. If a large number of cases is to be expected, the Cantonal parliament may set up a special court, the number of whose members shall be in proportion to the circumstances.

Section 23 Appeals

In accordance with the provisions of the Federal Act on the Organisation of the Courts, there can be no appeal to the Federal Court against the judgment of the Cantonal court.

Section 24 Taking of evidence

1. The Cantonal court shall establish the evidence ex-officio and assess that evidence in its own discretion. It shall not be bound by the submissions of the parties. If it wishes to go further in its judgment than the submissions of the plaintiff, it shall give the parties an opportunity to state their views on the subject beforehand.

2. If a complaint is lodged against the person bearing third party liability, the court shall make provision to enable the insurer or the Confederation to defend its interests in the proceedings.

3. The Federal Court shall not be bound by the findings of fact of the lower court.

Section 25 Advances

If there are grounds for anticipating that the legal proceedings will last a certain time, the court shall make advances which shall in no way prejudice the final ruling.

CHAPTER V

Major incidents

Section 26 Principles

1. Where it appears that the financial resources, available to the person bearing third party liability, of the private insurer and the Confederation acting as insurer will not be sufficient to meet all claims for compensation (major incidents), the Federal Assembly shall make compensation regulations by adopting a Federal Order of general application, not subject to referendum. These regulations may cancel the right of recourse of the Swiss national accident insurance fund and that of the private insurers with regard to the person alleged to be liable. If necessary, the Confederation may pay additional contributions for damages that are not covered.

2. The regulations shall lay down the general principles with regard to compensation for the injured parties in such a way as to provide for the equitable distribution of the available funds. They may, if necessary, derogate from the provisions of this Act.

3. The Federal Assembly may require a special, independent authority to be responsible for the implementation of the compensation regulations. The decisions of that authority may be challenged in the Federal Court.

4. The Federal Council shall take any provisional measures that may be necessary.

Section 27 Modification of insurance payments, distribution premiums

1. Where a major incident results in a "state of distress" the Federal Council may issue regulations in relation to private insurance :

- a) on the modification of payments by the insurer ;
- b) on the levying of distribution premiums on policy holders ;
- c) on the deduction of such premiums from insurance payments.

2. The power to make such regulations shall not extend to third party liability insurance required to be taken out by virtue of Sections 10, 11 and 17. The Federal Council may take similar measures in relation to social insurance and insurance under public law.

CHAPTER VI

Penal provisions

Section 28 Failure to fulfil an obligation to be insured or to constitute reserves

1. Any person who deliberately fails to fulfil his obligations with regard to insurance or constituting reserves shall be punished by imprisonment and fine. The fine shall amount to at least twice the annual private insurance premium.

2. If the guilty party has acted through negligence, he shall be punished by imprisonment or a fine of up to Frs. 20,000.

Section 29 Offenders

Any person who, intentionally or by negligence, shall offend against this Act, its implementation provisions or a decision by the authority based on these texts, shall be punished by imprisonment or a fine of up to Frs. 20,000.

Section 30 Jurisdiction

The Federal Act on Administrative Penal Law shall be applicable. The Federal Energy Office shall be the competent administrative authority for implementation and judgment.

CHAPTER VII

Reciprocity

Section 31

In cases of damage occurring abroad, affecting persons domiciled abroad and for which the operator of a nuclear installation located in Switzerland or the holder of a transport licence granted by Switzerland bears third party liability, compensation by virtue of this Act is due to the extent that the State concerned has provision for at least equivalent treatment with regard to Switzerland. The maximum cover shall not in this case be lower than Frs. 50 million even if the State concerned provides a lower limit for third party liability.

CHAPTER VIII

Concluding provisions

Section 32 Implementation

The Federal Council shall be responsible for implementing this Act. To that end it shall take all necessary measures.

Section 33 Amendment of existing legislation

1. The Federal Act on the Organisation of Justice shall be amended as follows :

Section 41.b

The Federal Court is the only jurisdiction competent for :

- b) actions at civil law by individuals or associations against the Confederation where the amount of the claim is at least Frs. 8,000, save for actions brought under the Federal Acts of 28th March, 1905 on the Third Party Liability of Railway, Steamship and Postal Undertakings, the Act on Road Traffic, and the Federal Act of ... on Third Party Liability in the Nuclear Field and all actions against the Federal railways ;

Section 45.c (new)

Appeals are receivable, regardless of the value of the claim, in civil cases relating to a right of a pecuniary nature :

- c) in disputes relating to nuclear incidents (Act of ... on Third Party Liability in the Nuclear Field.

Section 117.abis (new)

abis. a civil law action by virtue of Section 45.c (new) is allowed ;

2. The Federal Act of 23rd December, 1959 on the Peaceful Uses of Atomic Energy and Radiation Protection shall be amended as follows :

Sections 12 to 28

Repealed

Section 35, first paragraph

1. Any person who, without a licence, carries out acts requiring a licence or who does not comply with the conditions and obligations attached to a licence, shall, unless the elements constituting a more serious offence are present, be liable to a fine of up to Frs. 20,000. An attempt to commit, and complicity in, an offence are punishable.

Section 34 Transitional provisions

1. The new legislation shall apply to damage occurring before the entry into force of this Act and discovered after its entry into force.

2. The fund for deferred atomic damage (Section 19 of the Act of 23rd December, 1959) shall be liquidated. The capital in it shall be transferred to the fund for nuclear damage set up by virtue of Section 15 of this Act.

Section 35 Referendum and entry into force

1. This Act is subject to an optional referendum.

2. The date for entry into force of this Act shall be fixed by the Federal Council.