NUCLEAR LAW Bulletin

number 41

Contents

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June 1988

Nuclear Energy Agency
Organisation for Economic Co-operation and Development

Pursuant to article 1 of the Convention signed in Paris on 14th December, 1960, and which came into force on 30th September, 1961, the Organisation for Economic Co-operation and Development (OECD) shall promote policies designed

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

The original Member countries of the OECD are Austria, Belgium, Canada, Denmark, France, the Federal Republic of Germany, Greece, Iceland, Ireland, Italy, Luxembourg, the Netherlands, Norway, Portugal, Spain, Sweden, Switzerland, Turkey, the United Kingdom and the United States The following countries became Members subsequently through accession at the dates indicated hereafter Japan (28th April, 1964), Finland (28th January 1969), Australia (7th June, 1971) and New Zealand (29th May, 1973)

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

The OECD Nuclear Energy Agency (NEA) was established in 1957 under the name of the OEEC European Nuclear Energy Agency It received its present designation on 20th April 1972 when Japan became its first non-European full Member NEA membership today consists of all European Member countries of OECD as well as Australia Canada Japan and the United States The commission of the European Communities takes part in the work of the Agency

The primary objective of NEA is to promote co-operation between the governments of its participating countries in furthering the development of nuclear power as a safe environmentally acceptable and economic energy source.

This is achieved by

- *encouraging harmonisation of national regulatory policies and practices 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*
- *assessing the contribution of nuclear power to the overall energy supply by keeping under review the technical and economic aspects of nuclear power growth and forecasting demand and supply for the different phases of the nuclear fuel cycle*
- *developing exchanges of scientific and technical information particularly through participation in common services*
- *setting up international research and development programmes and joint undertakings*

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

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LEGISLATIVE AND REGULATORY ACTIVITIES

• *Argentina*

NUCLEAR LEGISLATION

1987 Decree approving the National Energy Plan for 1986-2000

Decree No. 306 was published in the Official Gazette (Boletin Oficial de la Republica Argentina) on 23rd November 1987. It approves the National Energy Plan for 1986-2000 elaborated by the Energy Secretariat of the Ministry of Public Works and Services and attached to the Decree as Annex I. The Decree requires that all energy-sector companies and agencies align their economic and financial forecasts in accordance with the Plan.

The Decree also modifies, as necessary, the relevant provisions of an earlier Decree of 1979 which lays down the programme for the construction of nuclear power plants. The Energy Secretariat of the Ministry of Public Works and Services, in agreement with the Planning Secretariat, is responsible for making the necessary adjustments to implement the Plan.

ORGANISATION AND STRUCTURE

1987 Decree creating an Advisory Council in the framework of the National Atomic Energy Commission

Decree No 1832 of 16th November 1987 sets up an Advisory Council within the National Atomic Energy Commission (see Nuclear Law Bulletin Nos 15 and 23). The Council is charged with assisting the Commission as concerns rules for elaborating specific programmes of the Commission as well as for verifying the results of such programmes It is also responsible for advising the Commission on the following matters.

- preparing an annual draft budget;

- making plans for works and projects related to nuclear electricity generation;

- implementing international co-operation in accordance with rules determined by the Ministry of External Relations and Culture,

- preparing an organigram and various duties for the personnel of the Commission;

- making rules for granting scholarships and other contracts for the training of personnel;

- representing the Commission in the various bodies and companies in which the Commission participates

The Decree also names the six members of the Council and determines their category and status as specialised personnel of the Commission

REGIME OF RADIOACTIVE MATERIALS

1986 Decree amending 1980 Decree on the exploration programme for uranium ores

Decree No. 1896 was published in the Boletin Oficial de la Republica Argentina of 30th December 1986. It amends portions of Decree No 2765 of 31st December 1980 on the exploration programme for uranium ores (see Nuclear Law Bulletin No. 28)

"Contract areas" (concessions), may be assigned to third parties under the supervision of the National Atomic Energy Commission which will also be responsible for verifying production and for granting certificates for export and transport operations. The Government will fix annually the quantity of ores mined by such third parties which are necessary to meet national requirements. This Decree raises the quantities which may be exported from 25 per cent to 50 per cent of the total annual production and provides that only the State shall be the recipient of any portion of that percentage which is not exported.

Companies must file their export proposals with the National Atomic Energy Authority including a declaration that such exports will remain subject to control, particularly as concerns final destination of ore concentrates

Finally, the National Atomic Energy Commission must make an annual report to the Government on the status of the contracts granted under the Decree.

• *Chile*

RADIATION PROTECTION

1985 Regulations on radiation protection in relation to radioactive installations

Decree No. 3 of 3rd January 1985 was published in the Official Gazette (Diario Oficial de la República de Chile) on 25th April 1985 It approved Regulations on radiation protection in radioactive installations which were made in pursuance of the Health Code (Decree No. 725 of 11th December 1967) The Regulations establish personal radiation protection provisions and dose equivalent limits for occupationally exposed persons for the purpose of preventing overexposure to ionizing radiations and its effects on health. Persons exposed to radiation of natural origin or as a result of diagnosis or treatment are exempted from the Regulations.

"Occupationally exposed person" is defined in Section 2 as a person engaged in an occupation in radioactive installations or working with equipment generating ionizing radiations These persons are required to carry, while at work, a personal dosimeter to detect and record any ionizing radiations to which they may be exposed The employer must take all necessary radiation protection measures to reduce the risks of exposure The personal dosimeters must then be forwarded to the Institute of Public Health every three months so that the doses received are duly recorded

If the Institute determines that a worker has received a dose in excess of the annual dose limit, it must inform the appropriate health department so that the employer may transfer the worker to other duties

The annual dose equivalent limits themselves are laid down in Section 12 which provides as follows

whole body, gonads, soft tissue	-	5 rems;
cristalline lens	-	30 rems;
any other individual organ	-	50 rems.

For women of child-bearing years, radiation of the abdomen is kept as low as possible, and may, in any one year, only once exceed 1 25 rem per quarter Once a pregnancy has been confirmed and the employer notified, the woman may not be exposed to radiation entailing more than 0 5 rem for the fetus throughout the period of gestation until childbirth. Persons below 18 years of age may not be occupationally exposed to ionizing radiations

As concerns radioactive iodine, the Decree requires that workers undergo a urine examination every three months Any necessary occupational overexposure is subject to the express authorisation of the director of the health service.

• *Finland*

NUCLEAR LEGISLATION

1987 Nuclear Energy Act, Decrees and Decisions in implementation thereof

A new Nuclear Energy Act (No. 990/1987) was passed by the Finnish Parliament on 11th December 1987 and a series of Decrees, as well as two Decisions by the Council of State were adopted in application of the Act

The Nuclear Energy Act entered into force on 1st March 1988, repealing the Atomic Energy Act of 25th October 1957 (No. 356/1957) and Decree of 14th February 1958 (No 75/1958). The 1987 Act is comprehensive, covering uranium mining operations, nuclear facilities, all uses of nuclear material, including exports and imports, nuclear waste management etc., as well as non-proliferation issues.

The text of the 1987 Nuclear Energy Act is reproduced in the Supplement to this issue of the Bulletin.

The Decrees made under the Nuclear Energy Act entered into force on the same date as the Act itself and are briefly described below.

The Nuclear Energy Decree (No. 161/1988) specifies the concept and scope of the Nuclear Energy Act. It lays down the licensing procedure for nuclear activities and determines the cases exempted from licensing, which require only to be notified. The Decree also provides for supervising the safe use of nuclear energy; it refers to nuclear waste management and makes financial provision for its costs. Finally, it also contains provisions concerning competent authorities.

The Decree on the State Nuclear Waste Fund (No. 162/1988) deals with the tasks and the administration of the Fund. It provides that licence holders with obligations regarding nuclear waste management must pay annual fees to the State Nuclear Waste Fund to cover the costs of such management The Fund comes under the authority of the Ministry of Trade and Industry.

The Decree on the Consultative Committee on Nuclear Energy (No. 163/1988). This standing Consultative Committee was set up to undertake preparatory work with the Ministry of Trade and Industry on matters relating to the use of nuclear energy; it replaces the previous Committee originally set up under the 1957 Atomic Energy Act. Similar preparatory work concerning the safe use of nuclear will be carried out by the standing Consultative Committee on Nuclear Safety in conjunction with the Finnish Centre of Radiation and Nuclear Safety.

The Decree on Fees for Supervising the Use of Nuclear Energy (No 164/1988) replaces a previous Decree with the same object (No 637/1986) According to the new Decree, fees will have to be paid for licences and supervisory measures relating to the use of nuclear energy The fees will be

collected by the Ministry of Trade and Industry or the Centre of Radiation and Nuclear Safety

Finally, the Council of State took two Decisions under the 1987 Nuclear Energy Act concerning financial provision for the costs of nuclear waste management and the general terms and conditions applicable to loans granted from the State Nuclear Waste Fund respectively

• *France*

RADIATION PROTECTION

1988 Decrees relating to the protection against ionizing radiation

Following publication of the Decree of 2nd October 1986 amending the Decree of 15th March 1967 on protection of workers against the hazards of ionizing radiation outside large nuclear installations (see Nuclear Law Bulletin No 38), two new texts on radiation protection have recently been published.

These are respectively Decree No. 88-521 of 16th April 1988 amending the Decree of 20th June 1966 concerning the basic standards for radiation protection (see Nuclear Law Bulletin No 1), and Decree No. 88-662 of 6th May 1988 amending the Decree of 28th April 1975 concerning the protection of workers in large nuclear installations against the hazards of ionizing radiation (see Nuclear Law Bulletin No 16)

Both these important texts will be analysed in the next issue of the Bulletin.

FOOD IRRADIATION

1988 Order on the treatment by ionizing radiation of dried vegetables and dried fruit

The above Order of 6th January 1988 was published in the Official Gazette of 13th January 1988.

It specifies the conditions required for authorising possession with a view to sale or putting on sale dried vegetables and dried fruit which have been irradiated for purposes of insect control through exposure to cobalt 60 or caesium 137 gamma radiation or to electron beams with an energy below or equal to 10 million electron-volts

The absorbed dose for the above vegetables and fruit must not exceed one kilogray (KGy) and must also be such as to ensure that they are effectively treated for insect control. The General Directorate for consumption and suppression of fraudulent practices carries out controls in establishments engaged in irradiation work to check that the dose absorbed during treatment does not exceed the fixed limit

• *Federal Republic of Germany*

ORGANISATION AND STRUCTURE

Establishment of a Federal Office for Radiation Protection (1988)

On 22nd March 1988, the Federal Government decided to establish a Federal Office for Radiation Protection so as to concentrate existing federal powers in the field of nuclear safety in only one federal authority For the time being, such federal powers, including radiation protection, are still vested in different agencies, authorities and organisations, e g the Federal Institute for Physics and Technology (Physikalisch-Technische Bundesanstalt) and the Institute of Radiation Hygiene (Institut für Strahlenhygiene) of the Federal Health Office The reorganisation aims at a more effective federal supervision of nuclear energy activities by concentrating competence on one specialised Federal Office. Implementation of the Government's decision needs an Act of Parliament, which is currently being prepared.

• *Iceland*

RADIATION PROTECTION

1985 Radiation Protection Act

The above Act of 31st December 1985 (No. 117/1985) entered into force on 1st January 1986 and repealed the 1962 Act relating to safety measures against ionizing radiation.

The purpose of the 1985 Act is to ensure that safety measures are taken to prevent any detrimental effects of ionizing radiation from radioactive materials and radiological equipment.

The National Institute of Radiation Protection, an independent body under the supervisory authority of the Minister responsible for health, is competent for taking such safety measures

The Institute is responsible, inter alia, for the following

- instruction on radiation protection to personnel exposed to ionizing radiation, and control of radiation doses it receives,
- provision of information to the public and media;
- studies and research in the field of radiation protection,
- supervision and inspection to ensure compliance with the provisions of the Act and regulations made thereunder.

The Act lays down a system of permits for activities involving radioactive materials and radiation-emitting equipment No person may produce, import, export, own, sell or handle such materials or equipment without a permit issued by the Minister responsible for health, who may by regulation delegate such authority to the National Institute of Radiation Protection

Radiological equipment and radioactive materials used for purposes of diagnosis or treatment may only be owned by recognised health, research or educational establishments, physicians, dentists or veterinary surgeons

Radioluminous watches, pocket compasses, meters, etc., as well as radars, television sets, electron microscopes and equipment of that nature are exempted for the time being from permit requirements, provided that such equipment is not intended for the production of ionizing radiation.

As already mentioned, the National Institute of Radiation Protection periodically inspects radiological equipment and radioactive materials subject to permits and its personnel has free access to premises where they are used and stored. Any changes in the facilities housing such equipment or materials must be approved in advance by the Institute, which is also consulted during the design and construction stage of the facilities in question

The Institute may, if it considers it necessary for safety reasons, require that adjustments be made to the equipment and radioactive materials subject to inspection

If safety measures are considered insufficient by the Institute, or the adjustments required are not made within a given period, the Institute may forbid the use of the equipment or materials concerned until the necessary measures are taken.

Regulations made in implementation of the Act are briefly described below.

1986 Regulations relating to safety measures against ionizing radiation

The above Regulations were adopted on 24th July 1986 (No 356/1986) entered into force on the same date

They further detail the responsibilities and duties of the National Institute of Radiation Protection as laid down by the 1985 Act and also prescribe transport and packaging requirements for radioactive materials

When carrying out its work, the Institute will comply with the recommendations of the International Commission on Radiological Protection (ICRP) relating to radiation protection

The Regulations provide that the Institute will collaborate with other state institutions regarding research and control of radioactivity and will participate in Nordic and international co-operation in the radiation protection field

• *Luxembourg*

RADIATION PROTECTION

1987 Regulations of the Grand Duke implementing the 1983 Act on medical uses of ionizing radiation

The above Regulations of 17th February 1987 (published in the Official Gazette (Mémorial) of 23rd March 1987, Part A, No. 16) were made in implementation of the Act of 10th August 1983 on the medical uses of ionizing radiation (see Nuclear Law Bulletin No. 34) and in accordance with the Community Directives on radiation protection. The latter are on the one hand, Council Directive No. 80/836 EURATOM of 15th July 1980 fixing the revised basic safety standards for the health protection of the public and workers against the hazards of ionizing radiation (amended by Council Directive No. 84/467 EURATOM of 3rd September 1984, mainly regarding its Annexes) and, on the other, Council Directive No. 84/466 of 3rd September 1984 fixing the basic measures for the radiation protection of persons undergoing medical examinations and treatment (see Nuclear Law Bulletin Nos 26 and 34)

These Regulations further specify the provisions of the above-mentioned Act of 10th August 1983 concerning radiodiagnosis, radiotherapy and nuclear medicine, essentially with respect to the training of physicians, the useful life of appliances, the distribution of radiological tasks among the different fields of medicine and finally, their classification according to the appliances, isotope selection and the conditions to be observed during examinations and treatment by irradiation.

The Regulations also contain provisions common to radiodiagnosis, nuclear medicine and radiotherapy, in particular, with regard to possession and use of appliances and facilities and the establishment of an individual radiology book for the patients, on which the physician must note each radiological intervention and the number of exposures

The Annexes to the Regulations concern technical and administrative matters

• *Mexico*

REGIME OF RADIOACTIVE MATERIALS

1986 Decree on the import and export of hazardous materials or waste

The above Decree of 16th January 1986 was published in the Official Gazette (Diario Oficial de la Federacion) of 19th January 1987 and entered into force on the following day

It provides for controls on the import and export of all hazardous materials and waste which can harm the environment or property or which constitute a risk for the population. Such materials or waste include nuclear fuels, nuclear or radioactive waste and radiation-emitting equipment

Prior to the licensing procedure for the import and export of such items, the applicant for a licence must obtain from the Ministry of Urban Development and Ecology a document containing ecological guidelines authorising the movement of the hazardous materials or waste on the national territory or in territorial waters.

Granting of this document by the above Ministry is subject to provision of financial security or a deposit to ensure compliance with existing laws and regulations to cover compensation for any damage caused. The amount is fixed by the Ministry.

This document must be presented to the authorities responsible for granting export and import licences for hazardous materials and waste

As regards nuclear fuels, nuclear and radioactive waste and radiation-emitting equipment, the provisions of the 1984 Act on the administration and control of nuclear energy, made under Article 27 of the Constitution are applicable in the framework of the licensing procedure (see Nuclear Law Bulletin No 35)

The Ministry of Urban Development and Ecology, in accordance with the 1984 Act, co-ordinates its work under this Decree with the National Nuclear Safety and Safeguards Commission

• *Netherlands*

RADIATION PROTECTION

1986 Decree on radiation protection

This Decree of 10th September 1986 (Stb. 1986, No. 465) implements at national level the Directive of the Council of the European Communities of 15th July 1980 (No. 80/836 EURATOM) amending the Community basic safety standards for radiation protection (see Nuclear Law Bulletin No 26)

The Decree, which replaces the Radioactive Materials Decree of 1969 (Stb 1969, No 404), regulates the protection of the public and workers against the hazards of radiation from radioactive materials and apparatus, in accordance with the provisions of the above Directive In addition, it lays down a licensing system for the use of radioactive materials and radiation-emitting apparatus and prescribes general rules in their respect

• *Norway*

THIRD PARTY LIABILITY

1972 Act concerning Nuclear Energy Activities as amended by 1985 Act

Act No. 103 of 20th December 1985 amended the 1972 Act on Nuclear Energy Activities to take account of the 1982 Protocols to amend the Paris Convention and the Brussels Supplementary Convention. The modifications to the Act concern, in particular, like the Protocols, conversion of the unit of account into the Special Drawing Right (SDR) of the International Monetary Fund, an increase in the amount of liability assigned at State level by a factor of approximately 2.5 (see Nuclear Law Bulletin No 38); the Act also increases the nuclear operator's liability

The amendments to the Act entered into force immediately, that is on 20th December 1985, except for that of Section 30(1) raising the maximum amount of liability of a nuclear operator to 60 million SDR This latter amendment came into force on 13th March 1987 (see Nuclear Law Bulletin No 40)

The text of the 1972 Act as amended is reproduced in the Supplement to this issue of the Bulletin.

• *Spain*

RADIATION PROTECTION

1987 amendments to the 1982 Decree on Radiation Protection

The Royal Decree of 25th November 1987 on Protection against Ionizing Radiation (No 1753) was published in the Official Gazette of 15th January 1988. This Decree modifies the 1982 Royal Decree on Radiation Protection (see Nuclear Law Bulletin No. 30) as a result of Spain's entry into the European Community and its taking into account of EURATOM Directives 80/836 (see Nuclear Law Bulletin No. 26) and 84/467 (see Nuclear Law Bulletin No. 34) as regards the basic safety standards for the health protection of the general public and workers against the dangers of ionizing radiation.

The 1987 Decree amends relevant provisions of the 1982 Decree to reflect the basic safety standards of the EURATOM Directives concerning the types of activities which imply exposure, the justification and optimisation of exposure and the requirement that individual doses not exceed specified limits. It modifies the definition of occupationally exposed persons and makes the necessary provisions for persons under 18 years of age and women of child-bearing years Provisions for the control of annual dose equivalent limits and surveillance of workers are also laid down in accordance with the EURATOM Directives.

Finally, the annual dose equivalent limits are set out in Annex II to the Decree while Annex III gives the annual limits of intake by inhalation and ingestion for workers and members of the public.

• *Sweden*

RADIATION PROTECTION

1988 Radiation Protection Act

The above Radiation Protection Act was adopted by the Swedish Parliament on 10th May 1988 and enters into force on 1st July 1988.

The objective of the new Act is to protect humans, animals and the environment from the harmful effects of ionizing as well as non-ionizing radiation. As previously, the main responsibility for public radiation protection will rest with one central radiation protection authority.

According to the 1988 Act, the general obligations with regard to radiation protection will place a greater responsibility than in the past on persons carrying out activities involving radiation Persons engaged in such activities will be responsible for the safe processing and storage of radioactive waste. The Act also contains rules governing decommissioning of technical equipment which could generate radiation.

Basically, the same requirements still apply regarding licensing of activities involving ionizing radiation, with a certain extension covering, inter alia, also production and transportation of radioactive material As regards non-ionizing radiation, licensing under the new Act is only required by specific order from the Government or an authority designated by the Government.

As regards the applicability of the Act, the principle of a lower activity limit has been retained. The Government or an authority designated by it may also in future determine the scope of application of the Act by deciding exemptions, regarding the quantities of radioactive material which are considered harmless in the context of radiation protection or technical equipment emitting low-level radiation only.

Under the Act, it will be possible to adjust the licensing and supervisory procedures to the level of danger of the radiation source and the need for adequate competence, etc The individual licensing and supervisory resources may thus be allocated to areas of radiation sources causing specific problems which are hard to assess or where special radiation protection expertise is needed. The Act recognises standardised approval procedures combined with technical regulations, for other areas where developments have resulted in standardised equipment and where the risks are well known

The Act contains several rules providing for more effective supervision The supervising authority may in particular decide on the necessary regulations and prohibitions for each individual case. The possibilities of using penal provisions have been extended and a rule on the mandatory execution of orders regarding radiation protection measures has been introduced.

The Ordinance made in implementation of the Act is briefly described below.

1988 Ordinance on Radiation Protection

The Ordinance designates the Radiation Protection Authority as the central authority referred to in the Radiation Protection Act The Government may, in accordance with the Act, refer certain powers to such a subordinate authority.

The Ordinance provides that certain rules of the Radiation Protection Act do not apply to certain harmless quantities of radioactive material and technical equipment emitting only low-level radiation

• *Switzerland*

NUCLEAR LEGISLATION

1984 Ordinance on definitions and licences in the atomic energy field - amendment of 28th October 1987

On 28th October 1987, the Federal Council adopted an amendment to the above Ordinance of 1984, aimed essentially at ensuring that the commitments under the Treaty on the Non-Proliferation of Nuclear Weapons are complied with in Switzerland.

The goods and articles involving uranium enrichment by the gas centrifuge process and nuclear fuel reprocessing having been specified by the competent international bodies, are mentioned in the Ordinance. Henceforth, they are included in the goods subject to notification or licensing listed in the Annex to the Ordinance Also for non-proliferation purposes, the licensing requirement has been extended to the transit of so-called "sensitive" goods when they have been assigned elsewhere in Switzerland. The basis in both cases is the 1959 Atomic Energy Act, as amended in 1986 in respect of import and export of nuclear articles and technology (see Nuclear Law Bulletin No 38)

On the occasion of this revision, the becquerel was adopted as a measurement unit, which resulted in a redefinition of certain nuclear fuels and of the concept of radioactive "residues" (résidus).

Finally, the Ordinance now provides that a construction and an operating licence for a nuclear installation may be granted simultaneously in cases where safe operating conditions can be fully assessed

ORGANISATION AND STRUCTURE

1987 Ordinance concerning the Paul-Scherrer Institute

On 30th November 1987, the Federal Council decided the merger on 1st January 1988 of the Federal Institute for Reactor Research (IFR) and the Swiss Institute for Nuclear Research (ISN), both located on the opposite banks of the Aar river in the Argau canton, into a new research establishment, the Paul-Scherrer Institute. While the IFR and the ISN worked on fundamental research and applied research covering industrial applications respectively, the Paul-Scherrer Institute will be more of a multidisciplinary establishment for natural sciences and engineering

The Federal Council decided the Statute, aims, organisation and tasks of the Institute in an Ordinance which entered into force on 1st January 1988.

• *United Kingdom*

RADIATION PROTECTION

The Food Protection (Emergency Prohibitions) Order 1988

On 11th January 1988 the Food Protection (Emergency Prohibitions) Order 1988, made pursuant to the Food and Environment Protection Act 1985, came into force. This Order imposes prohibitions on the movement and slaughter for human consumption of sheep in relation to certain designated areas of Scotland. It is a continuation of emergency provisions implemented in response to the Chernobyl accident and replaces the Food Protection (Emergency Prohibitions)(No. 3) Order 1987 and the Food Protection (Emergency Prohibitions)(No. 4) Order 1987.

REGIME OF NUCLEAR INSTALLATIONS

The Electricity Generating Stations and Overhead Lines (Inquiries Procedure) Rules 1987

These Rules, which came into force on 14th January 1988, make new provision for the procedure for any public enquiry held pursuant to Section 34 of the Electricity Act 1957 in relation to applications for consent to construct or extend a generating station (including nuclear stations) The Rules were made pursuant to Section 11 of the Tribunals and Inquiries Act 1971. They revoke the previous Electricity Generating Stations and Overhead Line (Inquiries Procedures) Rules 1981 (see Nuclear Law Bulletin No. 29) These new Rules cover the same topics as the previous Rules but aim to shorten the potential length and thus cost of inquiries. They will apply to the Inquiry to be held into the application by the Central Electricity Generating Board to build a pressurised water reactor at Hinkley Point in Somerset, England.

THIRD PARTY LIABILITY

The Nuclear Installations (Isle of Man)(Variation) Order 1987

This Order, which amends the Nuclear Installations (Isle of Man) Order 1977 (see Nuclear Law Bulletin No. 20), came into force on 7th May 1987 The Nuclear Installations (Isle of Man) Order 1977 extends certain provisions of the Nuclear Installations Act 1965 (see Nuclear Law Bulletin Nos 1 and 33) as appropriate, to the Isle of Man. This Order extends amendments made to that Act by the Energy Act 1983 (see Nuclear Law Bulletin Nos 31 and 32) and

the Congenital Disabilities (Civil Liability) Act 1976 (see Nuclear Law Bulletin No. 19), as appropriate, to the Isle of Man.

It also makes minor amendments to the Schedule of the 1977 Order consequential upon the Carriage of Goods by Sea Act 1974 (an Act of the Board of Tynwald) and the Statutory Bodies (Transfer of Functions) Act 1969 (an Act of the Board of Tynwald)

• *United States*

REGIME OF NUCLEAR INSTALLATIONS

Amendment to NRC Rules of Practice on disclosure of information by licensees (1987)

On 12th December 1987, the Nuclear Regulatory Comission (NRC) amended its rules of practice to codify the obligation of licensees and applicants for licences to provide the NRC with complete and accurate information, to maintain accurate records and to provide for disclosure of information identified by licensees as significant for licensed activities, to better enable the NRC to ensure that the utilisation of radioactive material and the operation of nuclear facilities are consistent with the public health and safety and the common defence and security

Amendment to NRC Regulations on physical fitness qualifications for security personnel (1988)

On 7th January 1988, the NRC amended its regulations regarding physical fitness qualifications for security personnel. The regulations continue to require annual medical examinations and annual physical fitness testing for guards, armed response personnel and armed escorts, but the amendment deletes the scheduling requirement that the medical examination be conducted within the thirty days preceding the physical fitness test.

REGIME OF RADIOACTIVE MATERIALS

NRC amends Import/Export Regulations (1986)

On 31st December 1986, the NRC amended its regulations concerning the import of uranium from South Africa under a general licence. This action was necessary to implement the provision of the Comprehensive Anti-Apartheid Act of 1986, enacted 2nd October 1986, which prohibits the import into the United

States of uranium ore and uranium oxide produced or manufactured in South Africa The rule deletes the general licence to import source material with respect to the import of any uranium of South African origin, thereby precluding the import of this material unless a specific licence is requested and obtained.

South Africa, as used in the Anti-Apartheid Act and NRC regulations, includes the Republic of South Africa; any territory under the administration, legal or illegal, of South Africa (including Namibia), and the "Bantustans" or "homelands", to which South African blacks are assigned on the basis of ethnic origin, including the Transkei, Bophuthatswana, Ciskei, and Venda

It should also be noted that Section 303 of the Anti-Apartheid Act prohibits the import of any products grown, produced, manufactured by or otherwise exported by a "parastatal organisation" of South Africa A parastatal organisation is defined as a corporation, partnership or other entity owned or controlled or subsidised by the South African Government, but not a corporation, partnership, or entity which previously received start-up assistance from the South African Industrial Development Corporation but which is now privately owned. This statutory prohibition covers uranium in any form

RADIOACTIVE WASTE MANAGEMENT

NRC Amends Regulations on Disposal of Uranium Mill Tailings (1987)

On 11th November 1987, the NRC amended its regulations governing the disposal of uranium mill tailings to incorporate the ground-water protection regulations published by the US Environmental Protection Agency (EPA)

1987 Amendment to the Nuclear Waste Policy Act of 1982

Containers for the transport of plutonium

On 22nd December 1987, Public Law 100-203 went into effect It amended the Nuclear Waste Policy Act of 1982 to, among other things, add, in Section 5062, a new Subtitle H - Transportation. Section 5062 (the Murkowski Amendment) of that Public Law prohibits, in subsection (a), the transportation of plutonium by aircraft from a foreign nation to another foreign nation through United States airspace unless the plutonium is transported in a container which the NRC has certified as safe, as determined by subsection (b) of that Section, Section 201 of Public Law 94-79 (the so-called Scheuer Amendment), and all other applicable laws. The NRC must also evaluate such container certification requirements and those of the Scheuer Amendment in accordance with the National Environmental Policy Act of 1969 and all other applicable law. The certification referred to in subsection (a) with respect to a container must include·

- the determination of the NRC as to the safety of such container,

- a statement that the requirements of subsection (b)(2) were satisfied in the testing of such container; and

- a statement that the container did not rupture or release its contents into the environment during testing

Subsection (b) of Section 5062 directs the Commission, in order to determine whether the container referred to in subsection (a) is safe for the use in transportation of plutonium by aircraft, to:

- require an actual drop test from maximum cruising altitude of a full-scale sample of such container loaded with test materials; and

- require an actual crash test of a cargo aircraft fully loaded with full-scale samples of such container loaded with test material unless the Commission determines, after consultation with an independent scientific review panel, that the stresses on the container produced by other tests used in developing the container exceed the stresses which would occur during a worst case plutonium air shipment accident

The Nuclear Regulatory Commission may not certify that a container is safe for use in the transportation of plutonium by aircraft if the container ruptured or released its contents during testing conducted in accordance with the foregoing testing requirements.

The tests required in subsection (b) must be designed by the NRC to replicate actual worst case transportation conditions to the maximum extent practicable In designing such tests, the Commission must provide for public notice of the proposed test procedures, provide a reasonable opportunity for public comment on such procedures, and consider such comments, if any. The NRC must transmit to Congress a report on the results of each such test and shall make such results available to the public.

With respect to any shipments of plutonium from a foreign nation to a foreign nation which are subject to United States consent rights contained in an Agreement for Peaceful Nuclear Co-operation, the President is, under subsection (f), authorised to make every effort to pursue and conclude arrangements for alternative routes and means of transportation, including sea shipment. All such arrangements shall be subject to stringent physical security requirements, and other conditions designed to protect the public health and safety, and provisions of Section 5062 and all other applicable laws

The above provisions, other than subsection (f), do not apply with respect to plutonium in any form contained in a medical device designed for individual human application, or to plutonium in the form of nuclear weapons or to other shipments of plutonium determined by the Department of Energy to be directly connected with the United States national security or defence programmes.

Section 5062 does not apply to any containers for the shipment of plutonium previously certified as safe by the NRC under Public Law 94-79

All costs incurred by the NRC associated with the testing programme required by Section 5062 and administrative costs related thereto, shall be reimbursed to the Nuclear Regulatory Commission by any foreign country receiving plutonium shipped through United States airspace in containers specified by the Commission

Other amendments: waste disposal

Under those amendments introduced by Public Law 100-203, the Department of Energy (DOE) is directed to characterise the Yucca Mountain, Nevada site for development of the first permanent repository for high-level radioactive waste and spent nuclear fuel. Site specific activities for other sites are to terminate by 22nd March 1988.

DOE is authorised to site and construct, subject to licensing requirements, a deep geologic nuclear waste repository only at the Yucca Mountain site If that site proves unsuitable for use as a repository, DOE must terminate site-specific activities and report to the Congress

The requirements of the Nuclear Waste Policy Act (NWPA) for the application of the National Environmental Policy Act (NEPA) are changed to eliminate the requirement to consider alternative sites

NRC is directed to adopt the DOE's Environmental Impact Statement (EIS) "to the extent practicable". State and or local governments are offered the opportunity to conduct onsite oversight activities with the expenses to be covered by the Nuclear Waste Fund.

The amendments provide the following benefits to affected State and local governments·

- technical assistance to affected local governments,
- mitigation assistance to cover impacts of site characterisation activities; and
- financial assistance and grants-equal-to-taxes to affected local governments (including special purpose taxing districts)

DOE is authorised to make payments to Nevada as follows

- $10 million per year after signing an agreement until the repository begins accepting nuclear waste, and
- $20 million per year after beginning to accept nuclear waste until closure of the repository

However, a State, including Nevada, must waive its right to disapprove siting of a repository and its right to impact mitigation assistance, but not its right to technical assistance, in order to receive the payments

The amendments direct DOE to complete a report to Congress on the potential impacts of locating a repository in the Yucca Mountain site,

including the recommendations of the Secretary of Energy for mitigation of impacts, and a statement of which impacts should be dealt with by the Federal Government, which should be dealt with by the State with State resources including the benefits payments, and which should be a joint Federal-State responsibility

The NWPA requirements for the siting of a second deep geologic repository are repealed, but DOE is directed to report to the President and the Congress between 2007 and 2010 on the need for a second repository. DOE is also directed to terminate research on granite as a repository medium.

DOE's proposal to locate a monitored retrievable storage facility (MRS) in Oak Ridge, Tennessee is annulled and revoked. DOE is authorised to site, construct and operate one MRS facility as follows

- A survey of potentially suitable sites for an MRS facility (excluding Nevada) is to be conducted In so doing, DOE may conduct site-specific activities at the sites for purposes of gathering the information necessary to support a licence application The survey may begin after an MRS Commission reports to the Congress. A site may then be selected from among those surveyed. The selected facility will not require an environmental impact statement (EIS) but is to be accompanied by an environmental assessment.

- At least six months prior to selection, DOE must notify the affected State or Indian tribe Prior to selection, at least one public hearing is to be held in the vicinity of the site.

After DOE selects the site, the proposed host State may disapprove the selection The State's disapproval may be overridden by Congress under expedited procedures contained in the NWPA Once the selection is made, the host State may enter into a benefits agreement if the State surrenders its right to issue a notice of disapproval.

The NRC's issuance of a construction authorisation for the MRS is to be considered as a major Federal action requiring an EIS under NEPA. DOE is directed to complete the necessary EIS and submit it along with the application for an MRS construction authorisation to the NRC The Act links the construction and operation of the MRS to the development and construction of the first repository through the NRC licensing process. The following conditions are imposed on the issuance of an MRS licence:

- MRS construction may not begin until a licence for construction of a repository is issued by the NRC,

- the quantity of nuclear waste stored in the MRS may not exceed 10 000 metric tons until the permanent repository begins accepting nuclear waste,

- the quantity of nuclear waste may not exceed 15 000 metric tons; and

- construction of an MRS facility or acceptance of nuclear waste is prohibited during the time a repository licence is revoked by the NRC or construction of the repository ceases.

A three-member Monitored Retrievable Storage Review Commission is established for purposes of reporting to the Congress by 1st June 1989 on the need for an MRS facility. Its duties are to.

- review the status and adequacy of DOE evaluation of the systems advantages and disadvantages of bringing an MRS into the national nuclear waste disposal system,

- obtain comment and available data on MRS from affected parties, including states containing potentially acceptable sites,

- make a recommendation to Congress as to whether an MRS should be included in the national nuclear waste management system, including meeting needs for packaging and handling of spent nuclear fuel, improving the flexibility of the repository development schedule, and providing temporary storage of spent nuclear fuel accepted for disposal

In preparing its report the MRS Commission is directed to compare an MRS to the alternative of at-reactor storage of spent nuclear fuel prior to disposal. In making this comparison, it must consider a variety of specified factors, with economic factors including the impact on the costs likely to be imposed on ratepayers of the Nation's electric utilities for temporary at-reactor storage of spent nuclear fuel prior to final disposal in a repository, as well as the costs likely to be imposed on ratepayers of the Nation's electric utilities in building and operating an MRS facility

DOE is authorised to make payments to a State or Indian tribe hosting an MRS facility as follows:

- $5 million per year after signing an agreement until the facility begins accepting nuclear waste; and

- $10 million per year after beginning to accept nuclear waste until closure of the facility.

Again the host State must waive its right to disapprove the siting of MRS and its right to impact mitigation assistance but not to technical assistance.

The amendments establish within the Executive Office of the President the Office of the Nuclear Waste Negotiator

The President is to appoint a Negotiator to head this Office This Negotiator is to seek a State or Indian tribe willing to host a permanent repository or MRS facility at a suitable site. The Negotiator is authorised to negotiate the terms and conditions (including financial and institutional arrangements) under which the State or Indian tribe would be willing to host a repository or MRS facility. Congress must approve and enact implementing legislation for an agreement reached by the Negotiator and State or Indian tribe to take effect. The Negotiator's effort to find a State or Indian tribe willing to host a repository or MRS facility are independent of, and would proceed in parallel with, DOE efforts to site a repository at Yucca Mountain, Nevada and an MRS facility.

The DOE is directed to conduct an Environmental Assessment (EA) of any site that is the subject of negotiation. The resulting EA is subject to judicial review

An 11-member Nuclear Waste Technical Review Board is established to review the technical aspects of DOE's programme The Board is authorised to make recommendations to DOE and the Congress Within ninety days of enactment, the National Academy of Sciences (NAS) is to nominate not less than 22 members for membership on this Board The President is to select the members from this list and designate the Chairman

The Board's role is strictly limited to oversight of the "technical and scientific" aspects of the high-level waste (HLW) programme Members are to be individuals eminent in a field of science or engineering, including environmental sciences, and selected solely on the basis of established records of distinguished service

DOE is prohibited from shipping spent fuel or high-level waste except in packages certified by the NRC. DOE also is required to abide by NRC regulations on advance notification of State and local governments of nuclear waste shipments In addition, DOE is directed to provide technical assistance and funding for training public safety officials of local governments and Indian tribes pertaining to nuclear waste transportation Funds for the State and local technical assistance programme are to come out of the Nuclear Waste Fund

An Office of Sub-seabed Disposal is established with the DOE Office of Energy Research. The first Director of this office is directed to be appointed within thirty days of passage of the amendments. Within 270 days of enactment the DOE must submit a report to Congress on the subseabed disposal of HLW. DOE is also directed to establish a university-based consortium involving leading oceonographic universities and institutions, national laboratories and other organisations to investigate the technical and institutional feasibility of subseabed disposal. This consortium is to be established within sixty days of passage of the amendments It is directed to develop a research plan that would allow for the evaluation and development of sub-seabed disposal concepts by 1995.

By 1st October 1988, DOE is to complete a study and evaluation of dry cask storage technology for use at commercial reactor sites

• *Venezuela*

RADIATION PROTECTION

1986 Resolution on Concentration Limits for Radionuclides in Foods and Beverages

Resolution 9 of 4th July 1986 was published in the Official Gazette (Gaceta Oficial de la Republica de Venezuela) on 9th July 1986 The Resolution was made in pursuance of the General Regulations on foods promulgated in January 1959.

The Resolution lays down the following concentration limits I-131 - 0.41 (0 015)*; Cs-134 - 18 (0 65), Cs-137 - 32 (1 2), Sr-89 - 11 8 (0 44), Sr-90 - 0.91 (0 03)

• *Yugoslavia*

NUCLEAR LEGISLATION

1987 Act on postponement of the construction of nuclear power plants until the year 2000 (Socialist Republic of Slovenia)

The above-mentioned Act was approved by the Assembly of the Socialist Republic of Slovenia on 20th November 1987 and entered into force on 13th December 1987. It is published in the Official Gazette of the SRS No. 45/87.

As already mentioned when reporting on the Bill (see Nuclear Law Bulletin No. 40), this Act is a consequence of the increasing public opposition to nuclear energy. Under the Act, all constructions of nuclear power plants in Slovenia and investments of capital in other parts of Yugoslavia for this purpose are postponed until the year 2000

Excepted from the new Act are research activities, in particular on nuclear safety, as well as the examination, study and development of new

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* The first value is for microcuries/kg, with the equivalent in megabecquerels/kg given in brackets

technologies, and staff training in this field. The Slovene Government must report once a year to the Assembly of the Socialist Republic of Slovenia on the implementation of the Act

The Act is valid only for Slovenia. The preliminary procedure for a similar federal act is not yet completed

CASE LAW AND ADMINISTRATIVE DECISIONS

CASE LAW

• *Canada*

CASES RELATING TO DISCOVERY OF LOW LEVEL RADIOACTIVE WASTE IN A HOUSING SUBDIVISION (1987)

The discovery of lov level radioactive vaste in a housing subdivision at Scarborough in the Canadian province of Ontario has led to three recent Canadian Court decisions. The background, briefly stated, is as follovs

As a result of federal government investigations conducted in 1945, private radium refining activities and associated above-normal radiation levels were identified at certain locations in Toronto and Scarborough The Ontario government was informed of this situation. In 1973, under an Ontario government housing scheme, houses were built on the Scarborough site and in 1976 the lots were sold by the Ontario Housing Corporation to private individuals. The possibility of contamination of the site was raised in 1975 as a result of the discovery of contamination at the related Toronto site but, despite government investigations, no such contamination was identified In 1980, contamination was discovered at the site Plans were made to remove the contaminated soil; however inability to find a disposal site prevented their realisation. In 1986, because of the difficulty in finding a site to which the soil could be moved, Ontario offered to repurchase the properties at market value, as if the area were not contaminated, and some homeowners accepted this offer

Heighington v. Ontario 41 DLR (4th) 208

This action, which came before the Supreme Court of Ontario on 24th July and 15th September 1987, was an action by owners and former owners of houses in the relevant part of the subdivision against Ontario and the

Ontario Housing Corporation for (1) damages for negligence in relation to the events leading to the contaminated soil being on their properties and (2) breach of contract in relation to the contracts for sale of the properties.

The Court concluded that in the 1945-46 period following identification of the refining activities, the Ontario officials were negligent, even given the less strict standards of that time, in failing to ensure that any radioactive material was safely removed It found that it was foreseeable that, if such material were not removed, the health of future occupants of the land could be endangered In relation to the 1975 investigations, however, the court held that there was no negligence as he found that there was good reason to believe that any contaminated material had been widely spread and that there was no health hazard

No liability under contract law was found on the basis that there was no express warranty that the subdivision lots would be reasonably fit for the purpose of residential housing and no such warranty of fitness could be implied under Ontario law Nor was there any breach of a duty of disclosure, as, given the results of the 1975 investigation no likelihood of the premises being subject to radioactivity had been revealed

In relation to the losses suffered as a result of the negligence of 1945-46, special submissions were made in respect of emotional stress and punitive and exemplary damages The Court found that it was clearly foreseeable that, if someone through negligent conduct permits a residence to be built on soil contaminated by radioactivity, a person occupying such a residence without knowledge of the contamination will suffer emotional distress on hearing of the contamination It found, however, that such emotional stress was only compensable if it constituted a recognisable psychiatric illness

No punitive or exemplary damages were awarded as their award requires conduct such as malicious, arbitrary or outrageous conduct, which his Honour did not find to be present here.

Waste Not Wanted Inc. v Canada 2 CELR (NS) 24

The second action, in which judgment was handed down by the Federal Court of Canada (Trial Division) on 15th June 1987, was taken by the residents living in the vicinity of a site selected for disposal of the contaminated soil These residents formed a corporation which brought an action on the grounds of private nuisance and breach of riparian rights, amongst others.

The action was dismissed on grounds related to the legal status of corporations and the assignment of causes of action. The Court went on, however, to hold that, although it was reasonable for members of the corporation to be apprehensive about the plan to dispose of the radioactive soil near their residences, the evidence was insufficient to prove that the site was inadequate and that there would be an actual hazard to health.

Sevidal v Atomic Energy Control Board

The third action, for which judgment was handed down by the Supreme Court of Ontario on 29th July 1987, concerned the purchase of one of the lots

in the contaminated subdivision The vendors did not disclose to the purchasers that radioactive soil had been found in the area After signing an agreement for the purchase of the property, the purchasers were alerted to the issue by a newspaper article The purchasers contacted the Atomic Energy Control Board (AECB) and, after being advised that there was no contaminated soil on the lot the subject of their agreement and that the radioactive material in the area was of a low level and would be removed by the government, decided to proceed with their purchase They were not told by the AECB that testing of the area was not complete, that the property was close to the location where refining had been carried out, nor that, in accordance with AECB policy, only the current owners would be contacted and informed about any future contamination finding Before the closing date of the agreement, radioactive soil was found on the relevant lot. The AECB informed the vendors, being the then owners, but neither the vendors nor the AECB informed the purchasers The purchasers later learned of the find but understood that the contaminated soil would be removed. In 1984, due to the failure to remove the soil they sold the property at a loss.

The Court found that the amount of radioactive material in the relevant lot and related area was sufficient to be a potential danger to the owners of the lot even though, as it was buried, it did not constitute an immediate risk or hazard. It thus constituted a potentially dangerous latent defect in the property which, under Canadian law, the vendors, knowing of the defect, had a duty to disclose to the potential purchasers Accordingly, the vendors were liable in deceit in relation to their concealment of the circumstances at the time of signing, even though at that time radioactive material was not known to be on the lot itself They were further liable in deceit for not disclosing the discovery of radioactive material on the property between signing and closing

The Court also held that the AECB was liable for negligent misrepresentation in respect of the advice given to the purchasers It found that the AECB assumed responsibility for disseminating information about radioactivity in the relevant area and that the AECB employee dealing with the purchaser's enquiries knew that her skill and judgement was being relied upon in relation to a decision about the purchase of property. In these circumstances she had accepted a relationship which required greater care in the provision of information than had been exercised

The Court also found that the AECB was liable in negligence due to the failure of the AECB to act to correct the incomplete and inaccurate information, which had been given to the purchasers, once contaminated soil was found on the relevant property. To reach this conclusion it distinguished the case where a government authority has a policy of not disseminating certain information and the case here where incomplete and inaccurate information had been given with no qualification as to relying on it The Court found that Parliament had not intended the AECB to exercise its policy-making powers in such a way that non-disclosure of the policy would mislead a member of the public who made an appropriate enquiry

• *Sweden*

VIOLATION OF PRESCRIBED TECHNICAL SPECIFICATIONS FOR OPERATION IN OSKARSHAMN 3 (1987)

Background

On 6th September 1974, the King in Council granted the OKG AB (the operating utility) a licence, according to the Atomic Energy Act (1956.306), to construct, possess and operate a nuclear power reactor in a third unit at the Oskarshamn nuclear site on certain conditions The Swedish Nuclear Power Inspectorate was authorised to "issue those further conditions for the licence which are needed from a safety point of view or otherwise from a general point of view"

One condition for the licence was, inter alia, that the unit Oskarshamn 3 might be operated only after permission by the regulatory authority and that, at the latest six months before the planned loading of nuclear fuel and nuclear test operation, a final safety analysis report would be submitted to the regulatory authority for review, this report includes operational organisation, technical safety specifications for operation (regulatory status) as well as a programme for quality assurance measures during operation

The Swedish Nuclear Power Inspectorate, as the regulatory authority, decided on 28th November 1984 that Oskarshamn 3 would be put into operation In a letter to the OKG, the Inspectorate stated: "For the nuclear test operation as well as for continued operation of the reactor those conditions and regulations which are or will be issued by the Inspectorate shall apply". the letter refers to a memorandum of review, according to which, inter alia, technical specifications for operation, after approval of the Inspectorate, should be complied with for operation of the reactor.

On 14th December 1984, the Inspectorate granted permission for the nuclear test operation and approved the technical specifications for operation (edition of 10th December 1984)

In a letter to the OKG AB on 16th June 1987, the Inspectorate confirmed Chapter 7 in the technical specifications concerning conditions and limitations during annual shutdown for Oskarshamn 3 Under title 7 3. Reactivity Tests it is stipulated as a condition for such a test that the system 354 (the hydraulic scram system) shall be operable

Thus, the technical specifications are prepared by the OKG Company and approved by the Inspectorate which declares them to be prescribed and valid as conditions for operation of the nuclear power reactor within the meaning of Sections 8 and 25 of the Act on Nuclear Activities (1984 3) which replaced the 1956 Act in 1984 (the text of the 1984 Act is reproduced in the Supplement to Nuclear Law Bulletin No 33)

The Act on Nuclear Activities imposes on the licensee to maintain safety in all respects The Inspectorate supervises observance of the Act and the conditions and regulations made thereunder

Section 25 of the Act on Nuclear Activities stipulates that any person who violates conditions or regulations issued pursuant to the Act shall be liable to a fine or to imprisonment for a maximum of two years

Section 29 stipulates that such violations may be prosecuted by a public prosecutor only if they are submitted for prosecution by the supervisory authority

The Incident

Early on 24th July 1987, so-called local critical tests were begun without the prerequisites pursuant to the technical safety specifications and operational orders being complied with The hydraulic reactor scram system (354) was neither operable nor tested. Other relevant systems according to the operational order were not systematically tested and operable

During the local critical tests a reactor trip occurred on one occasion. Certain instrument readings in connection with the trip were discussed, but the trip did not induce steps other than repeating the test with reduced step length in the control rod withdrawal No records of the reactor trip in the form of computer printouts were made.

The shift team which had been on duty on the morning of 24th July discontinued the test series after having noticed that system 354 was not operable. The daily operational meeting was already terminated when information on the interruption of the tests reached the operational management of Oskarshamn 3. However, the operational meeting was informed that local critical tests were continuing and that RPS tests (i e. testing of system 354 and certain other reactor protection systems) would be made Nobody at the meeting questioned whether such actions were appropriate from a safety point of view

The operational management appointed a task group to investigate the occurrence and to report to the Presidium of the Central Safety Committee of OKG in the afternoon. An operation planner specified the operational order to the control room, and tests were then resumed with the system 354 and the other reactor protection systems operable. The systems had still not been tested pursuant to the prescribed procedure Neither the operation planner nor the shift team had noted that completed RPS-tests were a prerequisite for the systems being formally assigned as valid for operation in the year to come

Measures taken by the OKG and the Inspectorate

The Central Safety Committee of the OKG stated that a "flagrant violation" of the prescribed technical specifications for operation had occurred indicating deficiencies in the organisation and the administrative procedures. The Committee considered, however, on the basis of the report of the plant manager, that after correction and stricter control of the procedure for critical tests nothing prevented start-up of the plant

The OKG began a thorough investigation to clarify the course of events and their cause as well as to propose measures to prevent repetition and remedy the deficiencies noticed in the organisation and safety management. The result of the investigation and the action programme was communicated to the Inspectorate

The Inspectorate, in its preliminary analysis, also found reason to regard the incident as extremely serious. The Inspectorate therefore decided, on 30th July, firstly to ask all nuclear utilities to review their routines for safety management and secondly, to perform a thorough investigation of the incident at Oskarshamn 3 and its cause The investigation by the Inspectorate is published in a separate report.

The Inspectorate's Decision

In considering all aspects of the incident in Oskarshamn 3, the Inspectorate found that submitting the matter for prosecution was not called for in order to ensure greater respect of safety regulations issued by virtue of the Act on Nuclear Activities and to impose improved safety conditions in those areas where the incident has indicated deficiencies

The Inspectorate therefore decided not to submit for prosecution this violation of prescribed technical specifications in Oskarshamn 3 on 24th July 1987

The Inspectorate will separately review in detail the measures taken and proposed by the OKG and will state to which extent it deems additional measures are required. The other nuclear plants shall also be reviewed with regard to those circumstances which the incident in Oskarshamn 3 have given reason to call attention to.

The Board of the Swedish Nuclear Power Inspectorate took this decision on 13th November 1987

INTERNATIONAL ORGANISATIONS AND AGREEMENTS

INTERNATIONAL ORGANISATIONS

• *The OECD Nuclear Energy Agency – International Atomic Energy Agency*

JOINT PROTOCOL RELATING TO THE APPLICATION OF THE VIENNA CONVENTION AND THE PARIS CONVENTION

At its session in February 1988, the IAEA Board of Governors endorsed the Joint Protocol relating to the application of the Vienna Convention and the Paris Conventions on civil liability for nuclear damage This Protocol had been adopted by consensus on 30th October 1987 by a Joint IAEA/NEA Working Group of Governmental Experts. A report on that joint meeting of experts is contained in Nuclear Law Bulletin No. 40.

The Board agreed to the convening of a one-day conference, to be organised jointly by the IAEA and the OECD/NEA in conjunction with the thirty-second regular session of the General Conference in September 1988 for the purpose of adopting the Joint Protocol and opening it for signature The Board also decided to invite all Member States of the IAEA and the OECD/NEA to the Conference on the understanding that signature of the Joint Protocol will be possible only for those Member States that have at least signed either the Paris or the Vienna Convention. The OECD Steering Committee for Nuclear Energy at its meeting in April 1988 endorsed the Protocol and approved the convening of the conference On 10th June 1988, the OECD Council in turn approved the project.

When in force, the Protocol will extend mutually the special liability regime established under each Convention to the Parties to the other Convention and will prevent possible conflicts of law arising from the simultaneous application of the two Conventions to a nuclear incident It is hoped that the thus extended international nuclear third party liability regime might provide an incentive for broader adherence

• *International Atomic Energy Agency*

INTERNATIONAL LIABILITY OF STATES

At its special session on 8th-9th December 1986, the Board of Governors requested the Secretariat to prepare a background paper - in the form of a compilation and analysis of relevant treaty-law and other international instruments, international case-law and authoritative writings - on the question of international law for nuclear damage This question was for the first time raised at the General Conference's special session in 1986 where the view was expressed by some that, as the Paris and Vienna Conventions deal with liability for nuclear damage primarily under civil law, limiting themselves to the liability of individuals or juridical persons for damage resulting in loss of life or for damage to property, there is a need to consider the broader question of international liability for the injurious consequences of activities attributable to States in the context of their relations inter se and hence to elaborate - in a new multilateral instrument - the principle of international liability for nuclear damage under the law of State responsibility concerning international claims against States.

At its session in February 1987, the Board of Governors, having considered the material contained in a document prepared by the Secretariat, requested the latter to "consider whether it was necessary to devise a new instrument on State liability for nuclear damage", full account being taken of the work being done by the International Law Commission (ILC) In response to that request, the Secretariat prepared an additional study in which a brief account of the relevant work being done by the ILC, especially on the question of "international liability for injurious consequences arising out of acts not prohibited by international law" was given and which identified the main issues which would require consideration in connection with any new international instrument on State liability for nuclear damage. It was further suggested that an open-ended working group of governmental experts be convened for the purpose of studying further the issues involved in international liability for damage arising from a nuclear incident and the scope of a new international legal instrument in this field.

In the Board discussion in June 1987 on this subject, divergent views were expressed. Some Members felt it was premature for the Agency to begin active work on these issues by convening a working group considering that such work might be of prejudice to the efforts to harmonize the Paris and Vienna Conventions, while others felt that work on clarifying the issues involved in State liability for nuclear damage could be carried out simultaneously with the activities in the field of civil liability In the light of these divergent views it was decided that the Board would need more time for reflection It was further decided to circulate the Secretariat's paper to all Member States for comments

At its session in February 1988, the Board expressed the hope that sufficient Member States will have submitted their comments in due time in order to allow for a meaningful discussion in the Board on the subject

including the question how to deal further with the matter, in its June meeting in 1988.

• *European Communities*

COUNCIL REGULATIONS AND DECISION ON MAXIMUM PERMITTED LEVELS OF CONTAMINATION, ON IMPORTS OF AGRICULTURAL PRODUCTS AND ON EARLY EXCHANGE OF INFORMATION REGARDING RADIOLOGICAL EMERGENCIES (1987)

The work of the Council and the Commission of the European Communities on the above questions was reported in Nuclear Law Bulletin No. 39 This work has resulted in the adoption of Regulations and a Decision by the Council, whose texts are reproduced in the "Texts" Chapter of this issue of the Bulletin.

• *Council of Europe*

ACTIVITIES OF THE PARLIAMENTARY ASSEMBLY CONCERNING NUCLEAR ACCIDENTS IN 1988

Following the accident at Chernobyl, the Parliamentary Assembly of the Council of Europe adopted on 25th January 1988 a Recommendation (No 1068) to the governments of Member States on nuclear accidents, on the basis of a report presented by the Social and Health Affairs Committee. Several items of this Recommendation were set out in a Resolution (No. 888), also adopted by the Assembly on 25th January 1988, and which is addressed more specifically to the USSR and other Eastern European countries.

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

• *World Health Organization*

MEETING OF THE WHO WORKING GROUP ON EUROPEAN HARMONIZATION OF PUBLIC HEALTH ACTIONS IN RELATION TO NUCLEAR ACCIDENTS (1987)

This Working Group was organised in recognition of the lack of clear international guidelines on public health actions in relation to nuclear accidents which was highlighted by the Chernobyl accident The meeting (10th-13th November 1987) received reports from the Food and Agriculture Organisation, the International Atomic Energy Agency, the World Meteorological Organisation, the OECD Nuclear Energy Agency and the Commission of the European Communities It mainly concentrated on formulating a framework for decision-making in relation to areas, beyond the vicinity of an accident site, affected by direct deposition from radiation release or indirectly affected, as it was in this respect that substantial difficulties had occurred after the Chernobyl accident

The meeting considered the WHO document "Guidelines for derived intervention levels for food· WHO guidelines for application following widespread contamination of radionuclides resulting from a major accident" It found this to be a useful basis for a harmonized approach but identified certain issues as justifying further comment. These included age-specific risk factors, emergency values for situations before the full extent of an accident is known, country-specific needs due to variations in levels of deposition and/or dietary patterns and trade of foods between countries.

The Working Group also emphasised the importance of, and made recommendations in relation to, the rapid exchange of information on public health matters. In relation to the area in the vicinity of an accident site, the Working Group recommended the revision of the WHO guidelines on nuclear accident response.

RESOLUTION OF THE EXECUTIVE BOARD OF WHO (1988)

On 20th January 1988 the Executive Board of WHO considered the report of the Director-General of WHO on the work of WHO on guidelines for derived intervention levels concerning radioactive contamination of goods, including that of the Working Group on European Harmonization of Public Health Actions in Relation to Nuclear Accidents, and formulated a draft resolution which it recommended that the forty-first World Health Assembly adopt This resolution would request the Director-General of WHO (1) to continue to co-operate with Member States in the development and strengthening of national capabilities for the protection of public health following radioactive contamination of food supplies, including the development of derived intervention levels regarding radionuclides in food, and the monitoring of food supplies; (2) to provide support to Member States in case of radiological emergencies and in the preparation of plans and procedures for dealing with such emergencies; and (3) to intensify collaboration with other relevant organisations and agencies

in establishing capabilities for rapid exchange of information during emergencies and for radiation monitoring during normal and emergency conditions, and in harmonizing approaches to measure and control radioactive contamination for the protection of public health

AGREEMENTS

• *Belgium- Netherlands*

1987 AGREEMENT ON CO-OPERATION IN NUCLEAR SAFETY

An Agreement on co-operation in nuclear safety was concluded by Belgium and the Netherlands on 14th March 1987, in furtherance of the IAEA Conventions of 1986 on Early Notification and on Assistance in case of a Nuclear Accident or Radiological Emergency (see Supplement to Nuclear Law Bulletin No 38 for text of Conventions).

The Agreement provides for exchange of information on the operation of nuclear installations, safety supervision and alarm systems

Under the Agreement, both Parties undertake to inform each other immediately in case of increased radioactivity on their respective territories or in other states. In the event of incidents in their nuclear installations, both Parties will exchange relevant information, even if these incidents have no external consequences.

To this effect, a Belgian/Dutch Commission on nuclear safety was established which will report regularly to the Parties on its work

• *Denmark*

BILATERAL AGREEMENTS ON EXCHANGE OF INFORMATION AND NOTIFICATION IN THE CONTEXT OF NUCLEAR FACILITIES (1987) (FRG-USSR-United Kingdom-Poland)

Denmark has concluded Agreements with several countries in furtherance of the IAEA Convention of 26th September 1986 on early notification of a nuclear accident (see Supplement to Nuclear Law Bulletin No 38 for text of Convention) Similar Agreements concluded by the Nordic countries are reported in Nuclear Law Bulletin No 39 Some of the Agreements entered into by Denmark are briefly described below

Agreement with the Federal Republic of Germany, signed on 13th October 1987 The Agreement concerns various issues of interest in connection with nuclear safety and radiation protection In addition to the above-mentioned IAEA Convention of 1986, the Agreement refers to an Agreement of 4th July 1977 concluded between both countries, regulating exchange of information on construction of nuclear installations along the border (see Nuclear Law Bulletin No 22), as well as to the EURATOM Directive of 15th July 1980 (No 80/836) amending the Community basic safety standards for radiation protection (see Nuclear Law Bulletin No 26)

Agreement with the USSR, signed on 12th November 1987 The Agreement provides for exchange of information and notification concerning the operation of nuclear facilities.

Agreement with the United Kingdom, signed on 19th November 1987 The Agreement provides for early notification concerning the operation and management of nuclear facilities The Parties must, inter alia, notify each other forthwith in case of an accident involving a nuclear facility on their respective territories They shall also notify each other of any abnormal levels of radiation not caused by releases from facilities or activities on their respective territories. In addition, the Agreement provides for periodic exchanges of safety-related information on nuclear facilities and activities

Agreement with Poland, signed on 22nd December 1987. The Agreement relates to exchange of information and co-operation in the field of nuclear safety and radiation protection It provides, inter alia, for direct notification by the Parties of any accident involving a nuclear facility or activity on their respective territories, provision is also made for periodic exchanges of information on the operation of their nuclear facilities

The text of the Agreement between Denmark and Poland is reproduced in the "Texts" Chapter of this issue of the Bulletin

• *Federal Republic of Germany - German Democratic Republic*

1987 RADIATION PROTECTION AGREEMENT

The Agreement between the Federal Republic of Germany and the German Democratic Republic of 8th September 1987 on Mutual Exchange of Information and Experience in the Field of Radiation Protection (see Nuclear Law Bulletin No. 40) has now been published in Bundesgesetzblatt 1988 II p 159. It entered into force on 24th November 1987.

• *Federal Republic of Germany-United States*

EXTENSION OF THE AGREEMENT ON CO-OPERATION IN THE FIELD OF GAS-COOLED REACTORS (1987)

The Agreement of 11th February 1977 between the Federal Republic of Germany (Federal Ministry for Research and Technology) and the United States in the Field of Gas-Cooled Reactor Concepts and Technology (Bundesgesetzblatt 1977 II p. 34), which was concluded for a ten-year period, has been extended by an exchange of letters of 20th January/7th April 1987 until 11th February 1992 (Bundesgesetzblatt 1987 II p. 728).

The Agreement, which was amended by an unpublished Complementary Agreement of 30th September 1977, between the original Parties, the French Commissariat à l'Energie Atomique and the Swiss Office for Science and Research, provides for co-operation in the following fields (Article 2)

- development of gas-cooled reactor (GCR) technology;
- high-temperature reactor (HTR) fuel recycle technology,
- high-temperature reactor (HTR) steam cycle technology,
- high-temperature reactor (HTR) direct cycle technology,
- very high-temperature reactor and process heat technology,
- development of gas-cooled fast reactor (GCFR) technology,
- safety technology related to all gas-cooled reactor activities listed above;

- economic and environmental studies in the field of gas-cooled reactors

The extension is also valid for France and Switzerland, because the Federal Republic of Germany signed the letter of agreement also on behalf of the authorities of the said States.

MULTILATERAL AGREEMENTS

CONVENTION ON THE PHYSICAL PROTECTION OF NUCLEAR MATERIAL

The Convention on the Physical Protection of Nuclear Material entered into force on 8th February 1987 (see Nuclear Law Bulletin No. 24 for text of the Convention; see also Nuclear Law Bulletin No. 39). As at 16th March 1988 the following 22 States were Parties thereto:

Australia, Brazil, Bulgaria, Canada, Czechoslovakia, German Democratic Republic, Guatemala, Hungary, Indonesia, Republic of Korea, Liechtenstein, Mongolia, Norway, Paraguay, Philippines, Poland, Sweden, Switzerland, Turkey, Union of Soviet Socialist Republics, United States of America, Yugoslavia

The Convention has also been signed by EURATOM and the following 24 States:

Argentina, Austria, Belgium*, Denmark*, Dominican Republic, Ecuador, Finland, France*, Greece, Federal Republic of Germany*, Haiti, Ireland*, Israel, Italy*, Luxembourg*, Morocco, Netherlands*, Niger, Panama, Portugal, Romania, South Africa, Spain*, United Kingdom of Great Britain and Northern Ireland*

CONVENTION ON EARLY NOTIFICATION OF A NUCLEAR ACCIDENT

The Convention entered into force on 27th October 1986 (see Supplement to Nuclear Law Bulletin No. 38 for text of the Convention; see also Nuclear

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* Signed as EURATOM Member State

Law Bulletin No. 39) As at 16th March 1988 the following 24 States were Parties thereto:

Australia, Austria, Bangladesh, Bulgaria, Byelorussian Soviet Socialist epublic, China, Czechoslovakia, Denmark, Finland, German Democratic Republic, Hungary, India, Japan, Jordan, Malaysia, Mongolia, New Zealand, Norway, South Africa, Sweden, Ukrainian Soviet Socialist Republic, Union of Soviet Socialist Republics, United Arab Emirates, Socialist Republic of Viet Nam

The Convention has also been signed by the following 52 States

Afghanistan, Algeria, Belgium, Brazil, Cameroon, Canada, Chile, Costa Rica, Côte d'Ivoire, Cuba, Democratic People's Republic of Korea, Egypt, France, Federal Republic of Germany, Greece, Guatemala, Holy See, Iceland, Indonesia, Islamic Republic of Iran, Iraq, Ireland, Israel, Italy, Lebanon, Liechtenstein, Luxembourg, Mali, Mexico, Monaco, Morocco, Netherlands, Niger, Nigeria, Panama, Paraguay, Poland, Portugal, Senegal, Sierra Leone, Spain, Sudan, Switzerland, Syrian Arab Republic, Thailand, Tunisia, Turkey, United Kingdom of Great Britain and Northern Ireland, United States of America, Yugoslavia, Zaire, Zimbabwe.

CONVENTION ON ASSISTANCE IN THE CASE OF A NUCLEAR ACCIDENT OR RADIOLOGICAL EMERGENCY

The Convention entered into force on 26th February 1987 (see Supplement to Nuclear Law Bulletin No. 38 for text of the Convention, see also Nuclear Law Bulletin No. 39) As at 16th March 1988 the following 19 States were Parties thereto:

Australia, Bangladesh, Bulgaria, Byelorussian Soviet Socialist Republic, China, German Democratic Republic, Hungary, India, Japan, Jordan, Malaysia, Mongolia, New Zealand, Norway, South Africa, Ukrainian Soviet Socialist Republic, Union of Soviet Socialist Republics, United Arab Emirates, Socialist Republic of Viet Nam

The Convention has also been signed by the following 55 States

Afghanistan, Algeria, Austria, Belgium, Brazil, Cameroon, Canada, Chile, Costa Rica, Côte d'Ivoire, Cuba, Czechoslovakia, Democratic People's Republic of Korea, Denmark, Egypt, Finland, France, Federal Republic of Germany, Greece, Guatemala, Holy See, Iceland, Indonesia, Islamic Republic of Iran, Iraq, Ireland, Israel, Italy, Lebanon, Liechtenstein, Mali, Mexico, Monaco, Morocco, Netherlands, Niger, Nigeria, Panama, Paraguay, Poland, Portugal, Senegal, Sierra Leone, Spain, Sudan, Sweden, Switzerland, Syrian Arab Republic, Thailand, Tunisia, Turkey, United Kingdom of Great Britain and Northern Ireland, United States of America, Zaire, Zimbabwe

THE 1987 REGIONAL CO-OPERATIVE AGREEMENT FOR RESEARCH, DEVELOPMENT AND TRAINING RELATED TO NUCLEAR SCIENCE AND TECHNOLOGY (RCA)

The 1987 Regional Co-operative Agreement for research, development and training related to nuclear science and technology (RCA) entered into force on 12th June 1987 and replaced the 1972 RCA as extended in 1977 (see Nuclear Law Bulletin No 21) and 1982 By 16th March 1988, the following thirteen States were Parties to the Agreement

Australia, Bangladesh, China, India, Indonesia, Japan, the Republic of Korea, Malaysia, Pakistan, Singapore, Sri Lanka, Thailand, Viet Nam

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

RATIFICATION BY GREECE OF THE 1982 PROTOCOL TO AMEND THE PARIS CONVENTION (1988)

On 30th May 1988, Greece ratified the Protocol of 16th November 1982 amending the Paris Convention of 29th July 1960 on Third Party Liability in the Field of Nuclear Energy.

SOUTH PACIFIC NUCLEAR FREE ZONE TREATY

The South Pacific Nuclear Free Zone Treaty - the so-called Rarotonga Treaty - was adopted on 6th August 1985 at Rarotonga (Cook Islands) and entered into force on 11th December 1986 (see Nuclear Law Bulletin Nos 36 and 39).

The Treaty provides for the establishment in the South Pacific of a nuclear weapon free zone The Parties have pledged not to develop or supply nuclear weapons and to supply nuclear material and equipment for peaceful uses only on condition they are subject to IAEA safeguards under the NPT.

The Treaty is supplemented by three Protocols signed in Suva on 8th August 1986 The Protocols are addressed to the nuclear-weapon States, calling on them to refrain from using a nuclear weapon against a Party to the Treaty and from conducting nuclear explosive tests in the nuclear free zone

The status of signatures and ratifications of the Treaty is given in the following Table

SOUTH PACIFIC NUCLEAR FREE ZONE TREATY
(RAROTONGA TREATY)

Signatories	Date of Signature	Date of Ratification
Australia	6th August 1985	11th December 1986
Cook Islands	6th August 1985	12th May 1986
Fiji	6th August 1985	4th October 1985
Kiribati	6th August 1985	28th October 1986
Nauru	18th July 1986	15th April 1987
New Zealand	6th August 1985	13th November 1986
Niue	6th August 1985	28th October 1985
Papua New Guinea	16th September 1985	
Solomon Islands	29th May 1987	
Tuvalu	6th August 1985	16th January 1986
Western Samoa	6th August 1985	20th October 1986

The Protocols to the Treaty were opened for signature on 1st December 1986
The USSR signed Protocols 2 and 3 on 15th December 1986 The People's Republic of China signed Protocols 2 and 3 on 10th February 1987

• *Denmark-Poland*

AGREEMENT
BETWEEN THE GOVERNMENT OF THE KINGDOM OF DENMARK AND THE GOVERNMENT OF THE PEOPLE'S REPUBLIC OF POLAND CONCERNING THE EXCHANGE OF INFORMATION AND CO-OPERATION IN THE FIELD OF NUCLEAR ENERGY SAFETY AND RADIATION PROTECTION*
(22nd December 1987)

The Government of the Kingdom of Denmark and the Government of the People's Republic of Poland

HAVING REGARD TO the Convention of 26th September 1986 concerning early notification of a nuclear accident (hereinafter referred to as the Convention); and

HAVING REGARD TO the principles and decisions of the Final Act of 1st August 1975 of the Conference on Security and Co-operation in Europe;

CONVINCED that extensive co-operation between the States will help to reduce the risk and limit the consequences of nuclear accidents;

DESIROUS of reinforcing international co-operation in the field of nuclear safety and radiation protection;

RECOGNISING the importance of bilateral agreements in this sphere;

have entered into the following Agreement:

ARTICLE 1

Each Party shall provide the other with information on nuclear reactors and spent nuclear fuel storage facilities which are planned, under construction or in operation and also on warning systems against radiological hazards.

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* Unofficial translation

ARTICLE 2

Both Parties shall meet once a year, unless there is a need for an earlier meeting, in order to discuss the scientific basis and methods for the radiation protection of persons occupationally exposed to radiation, of the general public and of the environment.

ARTICLE 3

1. Each Party shall inform the other immediately and directly of any accident related to nuclear facilities or activities in cases where a release of radioactive materials could have an effect on the territory of the other

2 Each of the Parties shall directly inform the other of unusually high radioactivity levels in its territory even in cases where these cannot be attributed to an accident related to a nuclear facility or to other nuclear activities in its territory

ARTICLE 4

The content of the discussions held under Article 2 and all information supplied pursuant to this Agreement may be used without restriction unless they have been declared to be confidential. Such confidential information may be published or transmitted to third parties only by mutual agreement

ARTICLE 5

Both Parties shall promote and advance the development of scientific co-operation between institutions in the two States which are engaged in work on nuclear safety and radiation protection.

ARTICLE 6

The bodies designated by the two Parties to be responsible for the implementation of this Agreement are:

in the Kingdom of Denmark - the Ministry of the Environment

in the People's Republic of Poland - the National Atomic Energy Board

ARTICLE 7

In the event of disagreement between the two Parties as to the terms or application of this Agreement the Parties shall immediately start negotiations in a spirit of mutual understanding with a view to reaching a consensus.

ARTICLE 8

Ratification of this Agreement must be confirmed by an exchange of notes The date of receipt of the later of the two notes shall be considered to be the date on which the Agreement enters into force

ARTICLE 9

1 Amendments or additions to this Agreement must be discussed between the two Parties and be set down in writing

2 The appended Annex is an integral part of this Agreement.

3 This Agreement is entered into for an indeterminate period. Notice of termination may be given by either Party, in which case the Agreement shall cease to be effective six months after the day on which notice of termination was received

4 This Agreement was drawn up in Warsaw on 22nd December 1987 in two original copies in Danish and Polish, both versions being equally authentic.

ANNEX

to the Agreement between the Government of the Kingdom of Denmark and the Government of the People's Republic of Poland concerning the exchange of information and co-operation in the field of nuclear safety and radiation protection

1. As regards Article 1 of the Agreement·

1) In order that the Parties may be able to assess the effect on their territory of an accident in nuclear reactors or spent nuclear fuel storage facilities, the information provided shall comprise.

a) the name of the facility,
b) its purpose,
c) its location and address,
d) the name of the operator,

e) the name of the owner,
f) the main technical parameters of the facility,
g) the facility's present status. planned, under construction etc ,
h) method of operation,
i) commissioning date,
j) description of the site,
k) description of the system for the measurement of radioactive contamination,
l) description of the treatment of radioactive waste and spent nuclear fuel.

2) Information on the warning systems shall in particular include

a) a description of the measurement monitoring system, its organisation and the type of measurements, the principles on which the system is based, data on the measuring equipment etc ,

b) regulations and warning levels relating to radioactive contamination.

3) Information on planned nuclear reactors and spent nuclear fuel storage facilities shall be transmitted not later than the date of the official authorisation to begin construction.

4) Information on the commissioning of a nuclear reactor or a spent nuclear fuel storage facility shall be provided not later than six months before the scheduled start-up date.

5) The first information, referred to in points 1 and 2 above, shall be exchanged within three months of this Agreement entering into force Any substantial changes shall be notified immediately

2. As regards Article 3(1) of the Agreement:

Information shall be given in accordance with the provisions of Article 1(1) and (2) and Article 5(1) and (2) of the Convention

3. As regards Article 3(2) of the Agreement:

Information on unusually high radioactivity levels shall as far as possible include:

a) activity level and dose rate,
b) radionuclides,
c) place of measurement,
d) time of measurement,
e) meteorological conditions at the place and time of measurement

4. As regards Article 3(1) and (2) of the Agreement:

1) Information shall be addressed:

a) from Denmark to:
Duty Officer
Central Radiological Protection Laboratory,

b) from the People's Republic of Poland to:
Duty Officer
Nuclear Safety Office

2) Each Party shall immediately notify the other in writing of any change in the above-mentioned information

5 As regards Article 5 of the Agreement:

1) The area of co-operation shall cover

a) the main principles of the emergency plan to be implemented in the event of a nuclear accident or radiological hazards,

b) the methods to be used for detecting, measuring and identifying radioactive contamination, for processing measurement data and intercalibrating measuring equipment,

c) the methods to be used for forecasting the spread of radioacive materials in the biosphere,

d) the principles for determining derived reference levels for disaster situations,

e) the training of specialists in radiation protection and nuclear safety,

f) the principles governing the provision of information to the public about protective measures in the event of a radiological hazard

2) The bodies designated by the two Parties to be responsible for co-operation are:

a) in the Kingdom of Denmark - the Ministry of the Environment,

b) in the People's Republic of Poland - the National Atomic Energy Board.

COUNCIL REGULATION (EURATOM) No. 3954/87
of 22nd December 1987
laying down maximum permitted levels of radioactive contamination of foodstuffs and of feedingstuffs following a nuclear accident or any other case of radiological emergency

THE COUNCIL OF THE EUROPEAN COMMUNITIES,

Having regard to the Treaty establishing the European Atomic Energy Community, and in particular Article 31 thereof,

Having regard to the proposal from the Commission, drawn up after obtaining the opinion of a group of experts appointed by the Scientific and Technical Committee,

Having regard to the opinion of the European Parliament,

Having regard to the opinion of the Economic and Social Committee,

Whereas Article 2 (b) of the Treaty requires that the Council shall establish uniform safety standards to protect the health of workers and of the general public and ensure that they are applied, as further set out in Title Two, Chapter III of the Treaty;

Whereas, on 2nd February 1959, the Council adopted Directives, laying down basic safety standards the text of which was replaced by that of Directive 80/836/EURATOM, as amended by Directive 84/467/EURATOM, and whereas Article 45 of that Directive requires Member States to stipulate intervention levels in the event of accidents;

Whereas, following the accident at the Chernobyl nuclear power-station on 26th April 1986, considerable quantities of radioactive materials were released into the atmosphere, contaminating foodstuffs and feedingstuffs in several European countries to levels significant from the health point of view,

Whereas, the Community adopted measures to ensure that certain agricultural products are only introduced into the Community according to the common arrangements which safeguard the health of the population while maintaining the unified nature of the market and avoiding deflections of trade,

Whereas the need arises to set up a system allowing the Community, following a nuclear accident or any other case of radiological emergency which is likely to lead or has led to a significant radioactive contamination of foodstuffs and feedingstuffs, to fix maximum permitted levels of radioactive contamination in order to protect the population,

Whereas the Commission will be informed of a nuclear accident or of unusually high levels of radioactivity according to the Council Decision of

14th December 1987 on Community arrangements for the early exchange of information in the event of radiological emergency, or under the Convention on Early Notification of a Nuclear Accident of 26th September 1986;

Whereas the Commission will, if the circumstances so require, immediately adopt a Regulation rendering applicable pre-established maximum permitted levels,

Whereas, on the basis of current data available in the field of radiation protection, derived reference levels have been established and these may be used as a basis for the fixing of maximum permitted levels of radioactive contamination to be applied immediately following a nuclear accident or any other case of radiological emergency which is likely to lead or has led to significant radioactive contamination of foodstuffs and feedingstuffs,

Whereas such maximum permitted levels take due account of the latest scientific advice as presently available on an international scale whilst reflecting the need for reassuring the public and avoiding divergences in international regulatory practice;

Whereas, however, it is necessary to take due account of the particular conditions applying and, therefore, to establish a procedure allowing the rapid adaptation of these pre-established levels to maximum permitted levels appropriate to the circumstances of any particular nuclear accident or any other case of radiological emergency which is likely to lead or has led to significant radioactive contamination of foodstuffs and feedingstuffs;

Whereas the adoption of a Regulation rendering applicable maximum permitted levels would also maintain the unity of the Common Market and avoid deflections of trade within the Community,

Whereas, in order to facilitate the adaptation of maximum permitted levels, procedures should be provided for allowing the consultation of experts including the Group of Experts referred to in Article 31 of the Treaty;

Whereas compliance with the maximum permitted levels will have to be the subject of appropriate checks,

HAS ADOPTED THIS REGULATION:

Article 1

1 This Regulation lays down the procedure for determining the maximum permitted levels of radioactive contamination of foodstuffs and of feedingstuffs which may be placed on the market following a nuclear accident or any other case of radiological emergency which is likely to lead to or has led to significant radioactive contamination of foodstuffs and feedingstuffs.

2 For the purpose of this Regulation, "foodstuffs" means products which are intended for human consumption either immediately or after processing and "feedingstuffs" means products which are intended only for animal nutrition

Article 2

1. In the event of the Commission receiving - in particular according to either the Community arrangements for the early exchange of information in case of a radiological emergency or under the IAEA Convention of 26th September 1986 on early notification of a nuclear accident - official information on accidents or on any other case of radiological emergency, substantiating that the maximum permissible levels in the Annex are likely to be reached or have been reached, it will immediately adopt, if the circumstances so require, a Regulation rendering applicable those maximum permissible levels

2. The period of validity of any Regulation within the meaning of paragraph 1 shall be as short as possible and shall not exceed three months subject to the provisions of Article 3 (4)

Article 3

1. After consultation with experts, which shall include the Article 31 Group of Experts, the Commission shall submit to the Council a proposal for a Regulation to adapt or confirm the provisions of the Regulation referred to in Article 2 (1) within one month of its adoption.

2. The Commission shall when submitting the proposal for a Regulation referred to in paragraph 1 take into account the basic standards laid down in accordance with Articles 30 to 31 of the Treaty including the principle that all exposures shall be kept as low as reasonably achievable, taking the aspect of the protection of the health of the general public and economic and social factors into account.

3 The Council shall, acting by a qualified majority, take a decision on the proposal for a Regulation referred to in paragraphs 1 and 2 within the time limit set out in Article 2 (2).

4. In the event that the Council does not decide within this time limit, the levels set out in the Annex shall continue to apply until the Council does decide or until the Commission withdraws its proposal because the conditions set out in Article 2 (1) no longer apply.

Article 4

The period of validity of any Regulation within the meaning of Article 3 shall be limited. This period may be revised at the request of a Member State or on the initiative of the Commission in accordance with the procedure laid down in Article 3.

Article 5

1. In order to ensure that the maximum permitted levels laid down in the Annex take account of any new scientific data becoming available, the

permitted levels laid down in the Annex may be revised or supplemented, upon the submission of a proposal from the Commission to the Council in accordance with the procedure laid down in Article 31 of the Treaty.

Article 6

1 Foodstuffs or feedingstuffs not in compliance with the maximum permitted levels laid down in a Regulation adopted in accordance with Articles 2 or 3 shall not be placed on the market For the purposes of applying this Regulation, foodstuffs or feedingstuffs imported from third countries shall be considered to be placed on the market if, on the customs territory of the Community, they undergo a customs procedure other than a transit procedure.

2 Each Member State shall provide the Commission with all information concerning the application of this Regulation, in particular concerning cases of non-compliance with the maximum permitted levels The Commission shall communicate such information to the other Member States

Article 7

Rules for applying this Regulation and a list of minor foodstuffs together with the maximum levels to be applied thereto shall be adopted in accordance with the procedure laid down in Article 30 of Regulation (EEC) No 804/68, which shall apply by analogy. To this end an ad hoc Committee shall be set up

Article 8

This Regulation shall enter into force on the third day following that of its publication in the Official Journal of the European Communities

This Regulation shall be binding in its entirety and directly applicable in all Member States

ANNEX

MAXIMUM PERMITTED LEVELS FOR FOODSTUFFS AND FEEDINGSTUFFS (Bq/kg or Bq/l)

	Baby foods(1)	Dairy Produce(2,3)	Other foodstuffs except minor foodstuffs(4)	Liquid food-stuffs(5)	Feeding-stuffs(6)
Isotopes of strontium, notably Sr-90		125	750		
Isotopes of iodine, notably I-131		500	2 000		
Alpha-emitting isotopes of plutonium and trans-plutonium elements, notably Pu-239, Am-241		20	80		
All other nuclides of half-life greater than 10 days, notably Cs-134, Cs-137(7)		1 000	1 250		

1 Baby foods are defined as those foodstuffs intended for the feeding of infants during the first four to six months of life, which meet, in themselves, the nutritional requirements of this category of person and are put up for retail sale in packages which are clearly identified and labelled "food preparation for infants" Values to be established

2 Dairy produce is defined as milk falling within headings Nos 04 01 and 04.02 of the Common Customs Tariff, and the corresponding headings of the combined nomenclature as from 1st January 1988.

3 The level applicable to concentrated or dried products shall be calculated on the basis of the reconstituted product as ready for consumption

4 Minor foodstuffs and the corresponding levels to be applied to them will be as defined in accordance with Article 7

5. Liquid foodstuffs as defined by Chapters 20 and 22 of the Common Customs Tariff and by the corresponding Chapter of the combined nomenclature as from 1st January 1988 Values are calculated taking into account consumption of tap-water and the same values should be applied to drinking water supplies at the discretion of competent authorities in Member States Values for liquid foodstuffs to be established

6 Values to be established

7 Carbon 14 and tritium are not included in this group

Whereas adoption of this Regulation in its present form appears necessary in order to satisfy overriding and immediate requirements as mentioned in the third and fourth recitals,

HAS ADOPTED THIS REGULATION.

Article 1

The Regulation shall apply to the products covered by Annex II to the Treaty and to the products covered by Regulation (EEC) No. 2730/75, No 2783/75, No 3033/80 and No 3035/80 originating in third countries, with the exception of the products referred to in Annexes I and II to this Regulation.

Article 2

Without prejudice to other provisions in force, the release for free circulation of the products referred to in Article 1 shall be subject to compliance with the maximum permitted levels laid down in Article 3.

Article 3

The maximum permitted levels referred to in Article 2 shall be as follows:

the accumulated maximum radioactive level in terms of caesium 134 and 137 shall be:

- 370 Bq/kg for milk falling within headings 04.01 and 04.02 of the Common Customs Tariff and for foodstuffs intended for the special feeding of infants during the first four to six months of life, which meet, in themselves, the nutritional requirements of this category of person and are put up for retail sale in packages which are clearly identified and labelled "food preparation for infants";

- 600 Bq/kg for all other products concerned.

Article 4

1. Member States shall check compliance with the maximum permitted levels set in Article 3 in respect of the products referred to in Article 1, taking into account contamination levels in the country of origin. Checking may also include the presentation of export certificates. Depending on the results of the checks carried out, Member States shall take the measures required for Article 2 to apply, including the prohibition of release for free circulation, taking each case individually or generally for a given product.

2 Each Member State shall provide the Commission with all information concerning the application of this Regulation, notably cases of non-compliance

COUNCIL REGULATION (EEC) No. 3955/87
of 22nd December 1987
on the conditions governing imports of agricultural products originating in third countries following the accident at the Chernobyl nuclear power station*

THE COUNCIL OF THE EUROPEAN COMMUNITIES,

Having regard to the Treaty establishing the European Economic Community, and in particular Article 113 thereof,

Having regard to the proposal from the Commission,

Whereas, following the accident at the Chernobyl nuclear power-station on 26th April 1986, considerable quantities of radioactive elements were released into the atmosphere;

Whereas Regulation (EEC) No 1707/86 fixed interim maximum permitted levels of radioactivity for all agricultural products originating in third countries and intended for human consumption, with which imports of the products must comply and in connection with which checks are carried out by the Member States; whereas that Regulation was extended for the first time by Regulation (EEC) No. 3020/86 and again by Regulation (EEC) No 624/87 until 31st October 1987;

Whereas, without prejudice to Council Regulation (EURATOM) No 3954/87 of 22nd December 1987 laying down maximum permitted radioactivity levels for foodstuffs and feedingstuffs following a nuclear accident or any other case of radiological emergency. The Community must continue to ensure, with regard to the specific effects of the accident at Chernobyl, that agricultural products and processed agricultural products intended for human consumption and likely to be contaminated are introduced into the Community only according to common arrangements;

Whereas these common arrangements should safeguard the health of consumers, maintain, without having unduly adverse effects on trade between the Community and third countries, the unified nature of the market and prevent deflections of trade;

Whereas, since this Regulation covers all agricultural products and processed agricultural products intended for human consumption, there is no need, in the present case, to apply the procedure provided for in Article 29 of Directive 72/462/EEC,

Whereas compliance with the maximum permitted levels will have to be the subject of appropriate checks backed up by the possibility of prohibiting imports in cases of non-compliance;

Whereas, in order to clarify or adjust, as necessary, the measures provided for by this Regulation, a simplified procedure should be established,

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* The Annexes to the Regulation are not reproduced

with the maximum permitted levels The Commission shall circulate such information to the other Member States

Article 5

Where cases of repeated non-compliance with the maximum permitted levels have been recorded, the necessary measures may be taken in accordance with the procedure referred to in Article 6 Such measures may even include the prohibition of the import of products originating in the third country concerned

Article 6

1 The arrangements for applying this Regulation and any amendments to be made to the list of products unfit for human consumption, as listed in Annexes I and II, shall be adopted in accordance with the procedure provided for in Article 30 of Regulation (EEC) No. 804/68, which shall apply by analogy

2 To this end, an ad hoc committee shall be set up, composed of representatives from the Member States and chaired by a representative from the Commission

Within the Committee, the votes of the Member States shall be weighted in accordance with Article 148 (2) of the Treaty The Chairman shall not vote

Article 7

This Regulation shall expire two years after the date of its entry into force

Article 8

This Regulation shall enter into force on the day of its publication in the Official Journal of the European Communities.

This Regulation shall be binding in its entirety and directly applicable in all Member States

COUNCIL DECISION
of 14th December 1987
on Community arrangements for the early exchange of information in the event of a radiological emergency

(87/600/EURATOM)

THE COUNCIL OF THE EUROPEAN COMMUNITIES,

Having regard to the Treaty establishing the European Atomic Energy Community, and in particular Article 31 thereof,

Having regard to the proposal from the Commission, submitted after obtaining the opinion of the group of persons appointed by the Scientific and Technical Committee,

Having regard to the opinion of the European Parliament,

Having regard to the opinion of the Economic and Social Committee,

Whereas Article 2 (b) of the Treaty requires the Community to establish uniform safety standards to protect the health of workers and of the general public,

Whereas, on 2nd February 1959, the Council adopted Directives laying down basic standards for the protection of the health of workers and the general public against the dangers arising from ionizing radiations, which were last amended by Directive 80/836/EURATOM and Directive 84/467/EURATOM,

Whereas Article 45 (5) of Directive 80/836/EURATOM already requires that any accident involving exposure of the population be notified as a matter of urgency, when the circumstances so require, to neighbouring Member States and to the Commission,

Whereas Articles 35 and 36 of the Treaty already provide that Member States are to establish the facilities necessary to carry out continuous monitoring of the level of radioactivity in the air, water and soil and to communicate such information to the Commission so that it is kept informed of the levels of radioactivity to which the public is exposed,

Whereas Article 13 of Directive 80/836/EURATOM requires Member States regularly to transmit to the Commission results of reviews and estimates referred to in that Article;

Whereas the accident at the nuclear power station at Chernobyl in the Soviet Union demonstrated that, in the event of a radiological emergency and in order to fulfil its tasks, the Commission needs to receive promptly all relevant information in an agreed format,

Whereas some bilateral arrangements have been agreed upon by Member States and whereas all Member States have signed the IAEA Convention on Early Notification of a Nuclear Accident,

Whereas these Community arrangements will ensure that all Member States are promptly informed in the event of a radiological emergency in order to provide that the uniform standards for protection of the population as is laid down in the Directives made pursuant to Title Two, Chapter III, of the Treaty are applied throughout the Community,

Whereas the establishment of Community arrangements for the early exchange of information does not affect the rights and obligations of Member States under bilateral and multilateral treaties or conventions,

Whereas, in furtherance of international co-operation, the Community will participate in the IAEA Convention on Early Notification of a Nuclear Accident,

HAS ADOPTED THIS DECISION

Article 1

1. These arrangements shall apply to the notification and provision of information whenever a Member State decides to take measures of a widespread nature in order to protect the general public in case of a radiological emergency following

a) an accident in its territory involving facilities or activities referred to in paragraph 2 from which a significant release of radioactive material occurs or is likely to occur, or

b) the detection, within or outside its own territory, of abnormal levels of radioactivity which are likely to be detrimental to public health in that Member State, or

c) accidents other than those specified in (a) involving facilities or activities referred to in paragraph 2 from which a significant release of radioactive material occurs or is likely to occur, or

d) other accidents from which a significant release of radioactive materials occurs or is likely to occur.

2. The facilities or activities referred to in paragraph 1 (a) and 1 (c) are the following:

a) any nuclear reactor, wherever located;

b) any other nuclear fuel cycle facility,

c) any radioactive waste management facility,

d) the transport and storage of nuclear fuels or radioactive wastes,

e) the manufacture, use, storage, disposal and transport of radioisotopes for agricultural, industrial, medical and related scientific and research purposes; and

f) the use of radioisotopes for power generation in space objects

Article 2

1. When a Member State decides to take measures as referred to in Article 1, that Member State shall:

a) forthwith notify the Commission and those Member States which are, or are likely to be, affected by such measures and the reasons for taking them;

b) promptly provide the Commission and those Member States which are, or are likely to be, affected with available information relevant to minimising the foreseen radiological consequences, if any, in those States.

2. A Member State should whenever possible provide the Commission and those Member States which are likely to be affected with notification of its intention to take without delay measures as referred to in Article 1

Article 3

1. The information to be provided pursuant to Article 2 (1)(b) shall, without jeopardy to matters of national security, include, as far as practicable and appropriate, the following:

a) the nature and time of the event, its exact location and the facility or the activity involved;

b) the assumed or established cause and the foreseeable development of the accident relevant to the release of the radioactive materials,

c) the general characteristics of the radioactive release, including the nature, probable physical and chemical form and the quantity, composition and effective height of the radioactive release,

d) information on current and forecast meteorological and hydrological conditions, necessary for forecasting the dispersion of the radioactive release;

e) the results of environmental monitoring,

f) the results of measurements of foodstuffs, feedingstuffs and drinking water;

g) the protective measures taken or planned,

h) the measures taken, or planned, to inform the public,

i) the predicted behaviour over time of the radioactive release

2 The information shall be supplemented at appropriate intervals by further relevant information, including the development of the emergency situation and its foreseeable or actual termination.

3 The Member State referred to in Article 1 shall, in accordance with Article 36 of the Treaty, continue to inform the Commission at appropriate intervals of the levels of radioactivity as laid down in paragraph 1 (e) and (f)

Article 4

Any Member State, upon receipt of the information set out in Articles 2 and 3, shall.

a) promptly inform the Commission of the measures taken and recommendations issued following the receipt of such information;

b) inform the Commission, at appropriate intervals, of the levels of radioactivity measured by their monitoring facilities in foodstuffs, feedingstuffs, drinking water and the environment

Article 5

1 Upon receipt of the information referred to in Articles 2, 3 and 4, the Commission shall, subject to Article 6, immediately forward it to the competent authorities of all other Member States. Likewise the Commission shall forward to all Member States any information it receives about significant increases in the level of radioactivity or about nuclear accidents in non-Community countries and especially those adjacent to the Community

2 Detailed procedures for the transmission of the information referred to in Articles 1 to 4 shall be agreed by the Commission and the competent authorities of the Member States and tested at regular intervals

3 Each Member State shall indicate to the Commission the competent national authorities and points of contact designated to forward or receive the information set out in Articles 2 to 5. The Commission shall in turn communicate this and details of the designated Commission service to the competent authorities of the other Member States

4 Points of contact and the designated Commission service shall be available on a 24 hour basis.

Article 6

1. Information received pursuant to Articles 2, 3 and 4 may be used without restrictions except when such information is provided in confidence by the notifying Member State

2 Information received by the Commission relating to an establishment of the Joint Research Centre will not be circulated or released without the agreement of the host Member State

Article 7

This Decision does not affect the reciprocal rights and obligations of the Member States resulting from bilateral or multilateral agreements or Conventions existing or to be concluded in the field covered by this Decision and in accordance with its object and purpose

Article 8

Member States shall take the measures necessary to comply with this Decision within three months of the date of its notification

Article 9

This Decision is addressed to the Member States

• *Council of Europe*

PARLIAMENTARY ASSEMBLY
RECOMMENDATION 1068 (1988)[1]
on nuclear accidents

The Assembly,

1 Having revieved the situation one year after the Chernobyl accident,

2. Having regard to the proceedings of the Parliamentary Hearing on "Nuclear Accidents Protection of people and the environment" (Paris, 8th-9th January 1987);

3 Having examined various national and international measures, in particular the initiatives of international organisations such as the

1 Text adopted by the Assembly on 25th January 1988 (19th sitting)

International Atomic Energy Agency, the World Health Organisation, the Nuclear Energy Agency of the Organisation for Economic Co-operation and Development, and the Communities,

4 Recalling its previous work in the field of nuclear energy, and especially its Recommendation 949 (1982), on the concentration of industrial installations and nuclear power stations in frontier regions, and its Resolution 847 (1985), on radioactive waste management;

5 Noting that the Chernobyl accident.

i was due to the combination of (a) a sequence of human errors and (b) design factors specific to the RBMK reactor,

ii led to the uncontrolled release of radioactive materials which caused serious pollution of the environment in many countries,

iii revealed that European countries, notwithstanding co-operation within the European Communities and OECD, had no consistent or concerted way of responding to the emergency;

iv has led accordingly to loss of public confidence in the ability of national authorities to provide for nuclear safety and the protection of the public,

v has caused deferral in some countries, though not in the Soviet Union, of decisions on the expansion of nuclear electricity production;

6 Considering the need to establish strict international security arrangements to prevent nuclear catastrophes, building on the highest technological standards available;

7 Conscious that nuclear powered electricity is today a reality in Europe with the exception of a few countries, and that, in the present situation, its phasing-out in those countries that have substantial commitments would take not several years, but several decades,

8 Aware that, despite widespread use of nuclear energy, the mistrust and fear remain deeply embedded in public opinion;

9 Noting that this basic fear is increased by the secrecy that surrounds nuclear plants, and by the confusion and incoherence that dominate the information given to the public by the authorities in case of accident,

10 Considering that a nuclear accident may have transfrontier dimensions, and can even become a disaster for a whole continent, with long term health and environmental effects not comparable to any other accidents and catastrophies,

11. Believing that there is a danger that nuclear installations and nuclear materials under transport or storage may become targets of acts of international terrorism, which is becoming increasingly ruthless in its actions,

12. Believing that in the case of Europe this potentiality is amplified by the high population density and the closeness of frontiers,

13 Convinced that there is a need for closer co-operation at the European level, under more strict parliamentary supervision, as a vital element not only to avoid emergencies, but also in the ability of public authorities to respond adequately thereto;

14. Believing that human safety and the protection of the environment should be a major criterion in national and European decision making and rule setting,

15 Considering that agriculture is not only the most vital of society's activities in the sense that without food human life cannot continue, but also the sector most vulnerable to nuclear catastrophies;

16 Recalling the extensive damage caused by the Chernobyl accident to agriculture in wide parts of Europe - affecting grazing, harvesting, the sale of food as well as international trade - and fearful that future accidents could have even more serious consequences,

17 Recognising that reindeer husbandry and freshwater fishing in northern Scandinavia has been particularly affected, threatening the very identity and survival of the Lapp civilisation;

18 Aware that the uncertainty as regards the full consequences of Chernobyl remains an ongoing concern and will continue to haunt agriculture in the affected countries for years to come, as the different radioactive substances work through the soil and are absorbed by plants and animals, thus requiring permanent monitoring by the international community,

19. Noting that, while farmers have been compensated financially by governments, no guarantee system has been established in the event of future accidents, nor has compensation at international level, i e between governments, been satisfactorily included in existing conventions,

20 Noting that many uncertainties may always remain in the field of long term effects of radiation releases and of the effects of low levels of radiation;

21 Believing therefore that, pending further research, nuclear energy should be considered as potentially dangerous, and that as a general principle any unnecessary exposure to radiation should be avoided,

22. Recommends that the Committee of Ministers invite the Governments of Member States·

I As regards safety·

a to review and upgrade their commitments to co-operation within or with the IAEA, the OECD Nuclear Energy Agency and the European Communities,

b to accept a moratorium in new construction until international or European standards have been elaborated as regards design, safety, operational rules, and the rights of neighbouring states in cases where nuclear power stations are to be built inside a 100 kilometre-wide frontier zone,

c to shut down plants which do not correspond to the international standards,

d to provide for international inspection and monitoring of such compliance, and for the publication and availability on request of inspectors' reports throughout the IAEA area,

e to insist on designs or design adjustments which provide for automatic monitoring of the actions of reactor operators and the annulment of those which threaten nuclear safety,

f. to improve working conditions in and around nuclear power plants, and to review systems of training and re-training,

g to ensure in particular that simulators for the training of operators shall be available for a specified period (at least one year) before any new reactor is charged with fuel,

h to work towards less secretive attitudes on the part of those responsible for the civil nuclear industry, by inter alia insisting that spent fuel from civil reactors should be re-processed in separate buildings from those used for military re-processing, that the plutonium arising from civil operations should be stored separately from military plutonium, and that records thereof should be regularly published and made readily available;

i to ensure that nuclear power stations are kept under close governmental and legislative control, as a safeguard against commercial interests taking precedence over safety;

j to consider with caution the selling of nuclear technology to countries with little technical, medical and administrative potential to be deployed in case of accident,

k. to ratify, if they have not yet done so, the Convention on the Physical Protection of Nuclear Material, with a view to protecting nuclear materials while in international transport, in particular, plutonium,

l to keep under constant review security measures aimed at preventing the dangers of international terrorism,

II. As regards the protection of people and the environment.

a to ratify and to provide resources necessary for the implementation of the International Atomic Energy Agency (IAEA) Conventions on Early Notification of a Nuclear Accident and on Assistance in the Case of a Nuclear Accident or Radiological Emergency,

b. to make compulsory - by way of a Protocol to the IAEA Convention or a new legal instrument - that notification is made to neighbouring countries as well,

c to set up consultation machinery with the neighbouring states and the populations concerned before deciding to site nuclear plants in frontier regions,

d to draw up principles of public international law for liability and rules for adequate compensation for damage by the responsible government in case of accident,

e to agree on simplified radiation measurement schemes intelligible to the public at large;

f. to harmonize safety levels for radionuclides in the air, soil, water and foodstuffs, and to train qualified staff to measure them,

g. to agree on and to implement systems of measuring and monitoring radioactivity in the environment and of rapidly sharing this information, so that, in the event of an emergency, a coherent overall picture of the radiological situation emerges;

h to draw up and publish, in concertation with neighbouring countries that might be affected, emergency plans for all nuclear installations, with special regard to the evacuation and protection of the population, to the training and equipment of fire and ambulance services, and to the holding of rehearsals with the personnel involved,

i to agree on the criteria according to which, in the event of an emergency, public authorities should intervene to warn and protect the public against the effects of radioactive contamination and pollution, and to alert the public authorities of potentially affected countries,

j. to establish consultation with competent independent groups in order to assist the governmental control system in the efforts of controlling radiation, and to encourage co-operation between them and public authorities at local level as regards information of the public and the implementation of emergency measures,

k to include in their information schemes written information, especially for vulnerable areas, on shelter, food consumption, self-decontamination, etc , in advance of any accident, and additional information after accidents,

l to encourage and provide for epidemiological investigations designed to detect the long term effects of radioactive substances, in the form of malignant or hereditary diseases,

m. to encourage and provide for further studies on the impact of radiation on man, in particular in controversial areas such as bone marrow transplants, and to determine the exact role of medical and pharmaceutical professions in case of accidents,

n to harmonize exposure levels for foodstuffs, and to abstain from using political or commercial motivations in applying restrictions on imports and exports,

o to insist in international fora, in conformity with existing IAEA Conventions, on immediate notification of nuclear accidents in order to allow national authorities as well as farmers maximum time between a radioactive release and the contamination of surrounding or distant areas;

p to establish, nationally and internationally, accident scenarios for agriculture, for instance as regards the protection of exposed livestock and the decontamination of food, especially fresh foods and vegetables,

q. to work in favour of international harmonization - be it within OECD's Nuclear Energy Agency, IAEA, WHO or FAO - as regards methods for gathering, processing and expressing data on radioactivity - including its impact on the food chain - as well as strict emergency intervention levels for foodstuffs;

III As regards the future of energy production with respect to social and health consequences.

a. to set up research programmes, incentives and laws for a more rational use of energy-economising possibilities,

b. to compare the social costs and consequences of nuclear energy with those of fossil and renewable energy forms,

c to encourage industrial and scientific participation for solar energy-projects in European co-operation programmes such as EUREKA, in view of creating working places and innovative development for small and medium enterprises

• *International Atomic Energy Agency*

REGIONAL CO-OPERATIVE AGREEMENT FOR RESEARCH, DEVELOPMENT AND TRAINING RELATED TO NUCLEAR SCIENCE AND TECHNOLOGY (2nd February 1987)

WHEREAS it is a function of the International Atomic Energy Agency (hereinafter referred to as the "Agency") to encourage and assist research on, and the development and practical application of, atomic energy for peaceful uses, which function can be fulfilled by furthering co-operation among its Member States and by assisting them in their national atomic energy programmes,

WHEREAS the Governments Parties to this Agreement (hereinafter referred to as the "Governments Parties") recognise that, within their national atomic energy programmes, there exist areas of common interest wherein mutual co-operation can promote the more efficient utilisation of available resources; and

WHEREAS, under the auspices of the Agency, the Governments Parties desire to enter into a Regional Agreement to encourage such co-operative activities,

NOW, THEREFORE, it is agreed as follows.

ARTICLE I

The Governments Parties undertake, in co-operation with each other and the Agency, to promote and co-ordinate co-operative research, development and training projects in nuclear science and technology through their appropriate national institutions.

ARTICLE II

1. There shall be a meeting of representatives of the Governments Parties (hereinafter referred to as the "Meeting of Representatives") to be convened by the Agency. The Meeting of Representatives shall be held as required and, at least, once every year. Each representative may be accompanied by alternates, experts and advisers.

2. The Meeting of Representatives shall have the authority.

   a) to determine a programme of activities and to establish priorities therefor;

   b) to consider and approve the co-operative projects proposed in accordance with paragraph 1 of Article III,

   c) to review the implementation of the co-operative projects established in accordance with paragraph 2 of Article III,

   d) to co-ordinate the activities of the project committees established in accordance with Article VI,

   e) to consider the annual report submitted by the Agency pursuant to paragraph 4 of Article VII; and

   f) to consider any other matters related to or connected with the promotion and co-ordination of co-operative projects for the purposes of this Agreement as set forth in Article I

ARTICLE III

1 Any Government Party may submit a written proposal for a co-operative project to the Agency, which shall, upon receipt thereof, notify the other Governments Parties of such proposal The proposal shall specify, in particular, the nature and objectives of the proposed co-operative project and the means of implementing it. At the request of a Government Party, the Agency may assist in the preparation of a proposal for a co-operative project.

2 In approving a co-operative project pursuant to paragraph 2(b) of Article II, the Meeting of Representatives shall specify·

a) the nature and objectives of the co-operative project,

b) the related programme of research, development and training;

c) the means of implementing the co-operative project and verifying the achievement of project objectives, and

d) other relevant details as deemed appropriate.

ARTICLE IV

1. Any Government Party may participate in a co-operative project established in accordance with Article III, by means of a notification of participation to the Agency, which shall notify the other Governments Parties of such participation.

2 Subject to paragraph 2 of Article VII, the implementation of each co-operative project established in accordance with Article III may start after receipt by the Agency of the third notification of participation in the co-operative project

ARTICLE V

1 Each Government participating in a co-operative project in accordance with Article IV (hereinafter referred to as "Participating Government") shall implement the portion of the co-operative project assigned to it in accordance with paragraph 3(b) of Article VI In particular, each Participating Government, subject to its domestic laws and regulations, shall

i) make available the necessary scientific and technical facilities and personnel for the implementation of the co-operative project; and

ii) take all reasonable and appropriate steps for the acceptance of scientists, engineers or technical experts designated by the other Participating Governments or by the Agency to work at designated

installations, and for the assignment of scientists, engineers or technical experts to work at installations designated by the other Participating Governments for the purpose of implementing the co-operative project

2 Each Participating Government shall submit to the Agency an annual report on the implementation of the portion of the co-operative project assigned to it, including any information it deems appropriate for the purposes of this Agreement

3 Each Participating Government, subject to its domestic laws and regulations and in accordance with its respective budgetary appropriations, shall contribute, financially or otherwise, to the effective implementation of the co-operative project and shall notify annually the Agency of any such contribution

ARTICLE VI

1. There shall be established a project committee for each co-operative project.

2 The project committee shall consist of one representative from each Participating Government and one representative from the Agency They may be accompanied by advisers

3 The functions of the project committee shall be

a) to determine details for the implementation of each co-operative project in accordance with its objectives,

b) to establish and amend, as necessary, the portion of the co-operative project to be assigned to each Participating Government, subject to the consent of that Government,

c) to supervise the implementation of the co-operative project, and

d) to make recommendations to the Participating Govrnments and to the Agency with respect to the co-operative project, and to keep under review the implementation of such recommendations

4 The project committee shall meet as required and, at least, once every year.

ARTICLE VII

1 The Agency shall perform secretariat duties under this Agreement

2 Subject to available resources, the Agency shall endeavour to support co-operative projects established in accordance with Article III by means of technical assistance and its other programmes Any such assistance shall be provided, mutatis mutandis, in accordance with the principle, rules and procedures governing the provision of technical assistance by the Agency

3 On the basis of recommendations made by the project committee for a co-operative project pursuant to paragraph 3(d) of Article VI and in consultation with the project committee, the Agency shall:

a) establish annually a schedule of work and modalities for the implementation of the co-operative project,

b) allocate among the Participating Governments the contributions made in accordance with paragraph 3 of Article V and paragraph 1 of Article VIII;

c) consider the annual reports submitted by the Participating Governments on the implementation of their portions of the co-operative project pursuant to paragraph 2 of Article V,

d) assist the Participating Governments in the exchange of information and in compiling, publishing and distributing reports on the co-operative project, as appropriate, and

e) provide scientific and administrative support for the meetings of the project committee

4 On the basis of the annual reports submitted by the Participating Governments pursuant to paragraph 2 of Article V and in consultation with them, the Agency shall prepare annually an overall report on the activities carried out under this Agreement, with particular reference to the implementation of the co-operative projects established in accordance with Article III, and submit it to the Meeting of Representatives

ARTICLE VIII

1 With the consent of the Meeting of Representatives, the Agency may invite any Member State other than the Participating Governments or appropriate international organisations to contribute financially or otherwise to, or to participate in, a co-operative project The Agency shall inform the Participating Governments of any such contributions or participation.

2. The Agency shall administer the contributions made pursuant to paragraph 3 of Article V and paragraph 1 of this Article for the purposes of this Agreement, in accordance with its financial regulations and other applicable rules The Agency shall keep separate records and accounts for each such contribution

ARTICLE IX

1. In accordance with its applicable laws and regulations, each Government Party shall ensure that the Agency's safety standards and measures relevant to a co-operative project are applied to its implementation.

2 Each Government Party undertakes that any assistance provided to it under this Agreement shall be used only for peaceful purposes, in accordance with the Statute of the Agency.

3 Neither the Agency nor any Government or appropriate international organisation making contributions pursuant to paragraph 3 of Article V or paragraph 1 of Article VIII shall be held responsible towards the Participating Governments or any person claiming through them for the safe implementation of a co-operative project.

ARTICLE X

Any Government Party to this Agreement and the Agency may, where appropriate and in consultation with each other, make co-operative arrangements with appropriate international organisations for the promotion and development of co-operative projects in the areas covered by this Agreement.

ARTICLE XI

Any dispute which may arise with respect to the interpretation or application of this Agreement shall be settled through consultations between the Parties concerned, with a view to the settlement of the dispute by negotiation or by any other peaceful means of settling disputes acceptable to them

ARTICLE XII

Any Member State of the Agency in the area of South Asia, South East Asia and the Pacific or the Far East according to the Statute of the Agency may become a Party to this Agreement by notifying its acceptance thereof to the Director General of the Agency.

ARTICLE XIII

1 This Agreement shall enter into force upon receipt by the Director General of the Agency of the second notification of acceptance in accordance with Article XII In the event such notification is received by the Director General of the Agency prior to the expiration of the Regional Co-operative Agreement for Research, Development and Training Related to Nuclear Science and Technology of 1972, as extended in 1977 and in 1982, this Agreement shall enter into force on the date of expiration of the said Agreement With respect to Governments accepting this Agreement thereafter, it shall enter into force on the date of receipt by the Director General of the Agency of the notification of such acceptance

2 This Agreement shall continue in force for a period of five years from the date of its entry into force

3 The co-operative projects established under the Regional Co-operative Agreement for Research, Development and Training Related to Nuclear Science and Technology of 1972, as extended in 1977 and in 1982, which are being implemented as of the date of entry into force of this Agreement, shall be considered as co-operative projects under this Agreement

DONE in Vienna, on the second day of February 1987, in the English language

STUDIES AND ARTICLES

ARTICLES

RADIOACTIVE WASTE MANAGEMENT IN SWITZERLAND: THE LEGAL FRAMEWORK*

V. Egloff, Nagra**

OVERVIEW OF THE RELEVANT LEGISLATION

From nuclear legislation to an Article in the Constitution

The Federal Council was very quick to recognise the importance of the peaceful uses of nuclear energy and, in November 1945, set up a Commission to study nuclear energy, responsible for promoting research in nuclear physics

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* This article, taken from "Cedra informe", No. 4/87 of December 1987, is reproduced by kind permission of the author and the editor Responsibility for the ideas expressed and the facts given rests solely with the author

** Nagra (National Co-operative for the Storage of Radioactive Waste) In 1972, all "producers" of radioactive waste in Switzerland came together to form Nagra, a national co-operative, with the aim of carrying out preliminary investigations for construction and operation of suitable waste disposal facilities on an overall basis for the whole of Switzerland According to its articles of association, the aim of Nagra is "Construction and operation of repositories for radioactive waste and related facilities In this connection, Nagra promotes national co-operation in the field of radioactive waste disposal "

In addition to the electricity supply utilities which operate, or have plans for, nuclear power plants, the Federal Government also has responsibilities with respect to radioactive waste, i e for waste arising from use of radioactive materials in medicine, industry, science and nuclear research Therefore Nagra includes the following the Swiss Confederation represented by the Federal Office of Public Health (BAG), Bernische Kraftwerke AG, SA l'Energie de l'Ouest-Suisse, Kernkraftwerk Gösgen-Däniken AG; Kernkraftwerk Kaiseraugst AG, Kernkraftwerk Leibstadt AG, Nordostschweizerische Kraftwerke AG

and for obtaining funding. As a result of the Federal Order of 18th December 1946, the necessary resources to promote research in the field of nuclear energy were made available. The Federal Council Order of 23rd August 1951 provided that the production, acquisition, distribution, import, export and transit of atomic material, nuclear apparatus, nuclear transformation equipment and instruments for measuring radioactivity were, as war materials, subject to licensing. Knowing that, in the context of the peaceful uses of nuclear energy, other problems would not be long in appearing, the Federal Council, in the summer of 1955, set up an Interdepartmental Administrative Commission for Questions Relating to Atomic Energy, and further created, in early 1956, a special delegation of the Federal Council which was also entrusted with questions relating to atomic energy In 1957, the Federal Council and Parliament agreed unanimously that the use of nuclear energy was necessary if Switzerland's energy supply was subsequently to be guaranteed

It was felt that, if the Confederation was to encourage research and development in the field of nuclear energy, to operate at international level and be able to regulate the use of nuclear energy, it was necessary to have an Article in the Constitution relating to atomic energy and radiation protection Furthermore, radioactive waste had already been produced for several decades in Switzerland by the phosphorescent paint industry and the clock industry, as well as in hospitals and various research laboratories

One of the first questions to be decided was whether it should be left to the Confederation to promulgate the necessary statutory provisions relating to nuclear energy or whether it would not be better to leave such powers to the cantons The Federal Council decided that regional differences were of little importance in the field of atomic energy Radiation protection provisions should rather apply throughout the country as a whole, and federal regulation was necessary here to avoid a dispersal of resources Further, given the scarcity of experts in this field, many cantons would have difficulty in effecting the technical monitoring required for the protection of the population With regard also to the international contacts it would be necessary to establish, federal jurisdiction would in any event be essential.

The discussions concerning the promulgation of an Article in the Constitution concentrated essentially on the question of whether the peaceful use of atomic energy should be nationalised or not Thus, the Constitutional provision proposed initially left this question open

On 24th November 1957, the Swiss people and States approved Article 24 quinquies of the Federal Constitution, which provides that

1 Legislation on atomic energy falls within the jurisdiction of the Confederation,

2 The Confederation shall adopt provisions relating to radiation protection

Federal Act of 23rd December 1959 on the Peaceful Use of Atomic Energy and Radiation Protection (Atomic Energy Act)

Pursuant to the Constitutional provision, the Federal Council promulgated, on 23rd December 1959, the Federal Act on the Peaceful Use of Atomic Energy and Radiation Protection. On expiry of the referendum deadline, the Federal Council brought the Act into force on 1st July 1960 The Atomic Energy Act is based on the principle of the use of atomic energy by private industry, and the law-makers rejected the other possible solutions based on the Constitutional provision (State monopoly, contracting out under licence, political-economic authorisation). The Atomic Energy Act provides for police surveillance only, but of a very strict nature. This surveillance is the responsibility of the Confederation

As regards disposal, the Atomic Energy Act includes the following provisions

- Nuclear installations requiring a construction and operating licence from the Confederation shall include installations used to obtain, treat, store or render harmless radioactive waste

- A licence from the Confederation is required for the transport, delivery, reception, import, transit, export and any other form of possession of nuclear fuels and radioactive waste

- Nuclear installations together with any possession of nuclear fuels and radioactive waste are subject to surveillance by the Confederation.

- If the licence to operate a nuclear installation is withdrawn, the operator is obliged to eliminate all sources of danger from the installation withdrawn from service. This applies also to the case of revocation of a licence to possess radioactive waste

The Atomic Energy Act contains no formal requirements as to the disposal of waste, it was said to be a problem which could, technically, be solved The clause relating to a guarantee of lasting and safe final disposal, based on Section 5 1 of the Atomic Energy Act, was however adopted subsequently

Another item of legislation entered into force at the same time as the Atomic Energy Act, namely the Ordinance on definitions and licences in the atomic energy field, dated 13th July 1960, which defines, among other things, the concept of residues (waste). This Ordinance has subsequently been comprehensively revised on two occasions. The text in force today is the Ordinance on definitions and licences in the atomic energy field of 18th January 1984 (Atomic Energy Ordinance). This considerably widens, as compared to the previous situation, the definition of radioactive waste and, in so doing, the scope of application of the Atomic Energy Act

On 19th April 1963, the Federal Council adopted a first Radiation Protection Ordinance which also contained specific provisions on radioactive waste. Under Section 108 of the Ordinance, the Federal Department of the Interior (FDI) was required to prepare repositories for the storage of

radioactive waste which had by law to be handed over This obligation was in principle matched by an obligation on the part of the Confederation to take charge of the waste It is interesting to note the pressure exercised by the Federal Council on the FDI as regards the timetable for doing this, in that the Ordinance stipulated that the FDI storage facilities had to be ready by the end of April 1964, i e completed in the year following the entry into force of the Ordinance

This Ordinance was later replaced by the **Radiation Protection Ordinance of 30th June 1976** (RPO) whose protection provisions apply in principle not only to nuclear installations and waste relating thereto (such as irradiated fuel rods), but also to all other radioactive waste The handling of such waste requires a licence from the Federal Office of Public Health. In addition, the Ordinance includes specific provisions concerning the treatment of waste, and maximum permitted levels for disposal into the environment The obligation to deliver waste to the Confederation does not apply to waste from nuclear installations used to produce energy or to that from plants for the reprocessing of irradiated nuclear fuel, in other words, to the waste essentially resulting from the use of nuclear energy By virtue of these provisions, the Confederation is no longer responsible for disposing of the radioactive waste from installations producing energy, and has to deal only with waste from research, industrial and medical applications Thus, the operators of nuclear power plants have been made responsible for disposing themselves of the radioactive waste from their installations

Federal Order of 6th October 1978 concerning the Atomic Energy Act

In the framework of the Atomic Energy Act of 1959, the Beznau I, Beznau II and Mühleberg nuclear power plants were built and brought on-line without any public opposition. Subsequent projects, however, came up against ever-increasing resistance, and this was particularly true of the nuclear power plant planned for Kaiseraugst Many initiatives at parliamentary level, three at cantonal level, and one popular initiative were undertaken with a view to amending the law in force In the autumn of 1975, the Head of the Federal Department of Transport, Communications and Energy, in agreement with the Federal Council, asked a Commission of legal experts to undertake a comprehensive review of the Atomic Energy Act The Commission concluded that certain amendments to the Act were urgently needed in the framework of a partial revision. The Federal Council was of the same opinion and presented, on 24th August 1977 and in the light of the Commission's preliminary work, the message concerning the revision of the Atomic Energy Act. On 6th October 1978, Parliament adopted the Federal Order concerning the Atomic Energy Act, and on 20th May 1979, the population approved this Order by 982 634 votes to 444 422 It was then brought into force by the Federal Council on 1st July 1979 The Order, completing the 1959 Atomic Energy Act, includes several provisions relating to radioactive waste, in particular·

- **Producers of radioactive waste are responsible for its safe disposal and for the cost thereof, the Confederation retaining the right, if necessary, to have the waste disposed of at the producer's expense** (Section 10 1).

- **The Federal Council may require waste producers to become members of a public body and to pay equitable contributions to cover the cost of waste disposal** (Section 10 3).

The reasons for this addition cannot now be determined since it was not discussed in either the national Council or the State Council It would seem, however, that a compromise had to be found between those in favour of a purely private solution, in accordance with the law in force at the time, and those who preferred disposal by the public sector. The wording gives no indication of the circumstances in which the Federal Council should use the option open to it. As long as producers carry out their obligations, there is little reason to set up a public law body.

- **The Federal Council may, if necessary, transfer the right of expropriation to third parties** (Section 10 4)

- **The Federal Council may, under a special procedure, grant permission for the taking of preparatory steps for the construction of a radioactive waste depository** (Section 10 2)

In pursuance of this provision, the Federal Council promulgated the Ordinance on preparatory measures for the construction of a radioactive waste repository, of 24th October 1979. The relevant procedure is described in detail below.

- **No one may construct a nuclear installation without having first obtained a general licence from the Federal Council** (Section 1)

There is no doubt that a radioactive waste repository constitutes a nuclear installation as defined in Section 1.2 of the Atomic Energy Act, whether it be a final repository or an interim one Consequently, the relevant provisions relating to the licensing procedure, contained in both the Atomic Energy Act and the Federal Order concerning the Act, are applicable Persons intending to construct a radioactive waste repository must therefore apply for both a general licence and a construction and operating licence Details on this point are given below

- **The general licence for nuclear reactors shall only be granted if the safe long-term disposal and permanent storage of radioactive waste from the installation are guaranteed and if there are arrangements for the decommissioning and possible dismantling of installations no longer in operation** (Section 3 2)

As a transitional provision, an operating licence for a nuclear installation in respect of which the operator has already obtained a siting licence will only be granted if there is a project guaranteeing the safe long-term disposal and permanent storage of the radioactive waste produced and if arrangements have been made for the decommissioning and possible dismantling of disused installations (Section 12 2)

In view of the terms of the Atomic Energy Act and before the entry into force of the Federal Order, the Federal Department of Transport, Communications and Energy made licences to operate nuclear power plants not covered by the Federal Order (Beznau I and Beznau II, Mühleberg, Gösgen)

subject to the following condition the licence would be null and void if, before 31st December 1985, there was no project guaranteeing the safe long-term disposal and permanent storage of the radioactive waste produced in the nuclear power plant, and if by then, no arrangements had been made for the decommissioning and possible dismantling of the installation It added, however, that the Federal Department of Transport, Communications and Energy could, on adequate grounds, adapt and prolong these time limits. A similar condition was included by order of the Federal Council in a decision on appeal concerning the Leibstadt power plant

The Atomic Energy Act is currently being revised and will include many new provisions relating to radioactive waste The consultation procedure for this has already been completed

DISPOSAL POSSIBILITIES

Under Section 9.3 of the 1959 Atomic Energy Act, if a licence to operate a nuclear installation is revoked, the operator is obliged to eliminate all sources of danger in the installation withdrawn from service More detailed provisions regarding the disposal of radioactive waste are contained in Sections 102 to 107 of the Radiation Protection Ordinance (RPO), the main features of which are

- the principle of minimising waste,
- a ban on uncontrolled disposal,
- maximum limits below which waste may be released into the environment or disposed of in the same way as non-radioactive waste;
- the mandatory delivery of solid radioactive waste to the Confederation, this delivery obligation does not, however, apply to waste from nuclear power plants

The Federal Order of 1978 concerning the Atomic Energy Act formally provides that the producer of radioactive waste is responsible for its safe disposal and of course for the cost thereof. But the Order does not say how disposal is to be carried out. There are two, fundamentally different ways of disposing of radioactive waste, namely·

- waste below certain limits may be declassified then disposed of into the environment, or dealt with as non-radioactive waste;
- other waste must be collected, if possible solidified, and lastly disposed of Waste which cannot be declassified is subject to the following provisions·

Conditioning and interim storage

Radioactive waste which cannot be declassified must be disposed of. For this purpose, gases, aerosols and liquids must be either precipitated or solidified, as appropriate (Sections 103 and 104 RPO) Waste which is neither from nuclear power plants nor reprocessing plants, must then be delivered to

the Confederation (Section 106 3 RPO) Certain separation, treatment and packaging requirements must then be observed. Waste whose half-life does not exceed sixty days constitutes an exception; it must be collected and stored at the place where it was produced, until its activity has decreased sufficiently

Radioactive waste resulting from nuclear energy production must, on the other hand, be disposed of by the waste producers. For this purpose, the waste must first be conditioned then stored, if necessary, before disposal Directive R-14 of the Principal Nuclear Safety Division (DSN) applies here to all waste from nuclear power plants except for irradiated fuel rods and reprocessing waste This Directive lays down three principles

- **Conditioning:** radioactive waste must be immobilised as far as possible in order to reduce effectively the release of radioactive substances from the matrix.

- **Packaging:** the conditioned waste must be packaged in such a way as to effectively restrict the escape of radioactive substances and to guarantee simple and safe handling during storage, transport and disposal operations.

- **Interim storage:** the conditioned and packaged waste must then be stored under surveillance, in an appropriate place

Directive R-14 thus makes it necessary to manufacture solid waste matrices, using inactive binding agents (cement, bitumen, synthetic agents) Solidification in matrices has safety advantages with respect to the interim storage, transport and disposal of waste, but generates an ever-increasing volume of waste, thus requiring a lot of space.

Directive R-14 also takes into account the technical and administrative requirements of the OECD Nuclear Energy Agency (NEA) as concerns the immersion - since discontinued - of low and medium-level waste

Disposal

Disposal is usually taken to mean permanent storage in geological formations This is not, however, a legal obligation since the Act does not specify any particular type of disposal. Thus, immersion was also recognised as a form of disposal. This would apply also to other methods such as sending waste into space or transmutation - both allowed in principle under the Act - providing they were technically feasible Waste must of course be disposed of effectively. "Temporary storage", as is sometimes discussed today, could not constitute real disposal and could at most be considered as an intermediary stage

Priority is given today to final storage To give concrete form to what is required of a final repository, the DSN and the Federal Commission for the Safety of Nuclear Installations (CSN) published Directive R-21, which lays down two protection objectives for the phase following operations at final repositories

- **Protection objective No. 1** the additional individual dose from a final repository must not exceed ten millirems per annum as a consequence of events or processes to be taken into account in a realistic manner,

- **Protection objective No. 2** the safety of the final repository must be guaranteed after sealing, without any safety or surveillance measure being necessary

These two safety objectives are not limited in time, i e. they are quasi-indefinite. The idea behind them is that future generations should not be exposed either to hazards or to the costs resulting from waste produced by current generations The consequence of protection objective No 2 is that monitored storage above or slightly below the ground is not a disposal option allowed in Switzerland This does not mean that surveillance of a final repository will not be permitted, but such surveillance must not be a necessary part of the safety system

In the coming years, a Directive will have to lay down the provisional rules on exemption limits. A study will also be made of the extent to which the regulations proposed by neighbouring States and the EEC can be adapted

The Radiation Protection Act is currently being revised, and the relevant consultation procedure has been completed

RESPONSIBILITY

The possibility of transferring responsibility for radioactive waste storage to the Confederation has been discussed several times in plenary meetings of the national Council As to the drafting chosen, the Federal Counsellors as a rule followed the proposal of the Federal Council and made radioactive waste producers responsible for safe disposal, as was already the case under the Radiation Protection Ordinance of 30th June 1976. However, the drafting chosen still left one possibility open, namely that the Confederation might itself assume this task, which it must in any case do in respect of any radioactive waste it produces. In the opinion of the Confederation Working Party for Nuclear Waste Management (AGNEB), consideration should be given to a taking over, by the State, of the minimal tasks remaining, at the earliest when a final repository is closed down

PROOF OF DISPOSAL

The problem of radioactive waste disposal has, for years, been one of the main topics of public discussion It was therefore clear that it would play an important role in the revision of the Atomic Energy Act The Federal Council thus found itself obliged to include radioactive waste in the proposed partial revision of the Act The Council put forward the three arguments below to explain what had persuaded it to mention radioactive waste in the Federal Order concerning the Atomic Energy Act

- no one knows how long it will remain possible to use immersion,

- account must be taken of the fact that, in future, reprocessing waste will have to be recovered;

- as a consequence of United States policy on non-proliferation, reprocessing will perhaps no longer be possible in the future

Whereas, in its message concerning the revision of the Atomic Energy Act, the Federal Council spoke only of the obligation of operators to dispose of their radioactive waste at their expense and in a safe manner, the Preparatory Commission of the National Council again proposed that proof of disposal be included as a supplementary condition for a licence This gave rise to detailed discussions in the National Council to determine how this condition should be translated into concrete form During the debate, three variations involving different levels of obligation were discussed While the majority of the Commission required a "project guaranteeing disposal", a minority settled for the expression "guarantee" while another minority preferred a "project of implementation" After detailed discussions, the National Council finally decided not to make the general licence subject to a project, nor to a project of implementation, but to require simply a guarantee of safe and permanent disposal and of the permanent storage of radioactive waste As for licences to operate installations regulated by the transitional provision, a "project guaranteeing disposal" was required

When the Federal Order concerning the Atomic Energy Act entered into force, a general licence was no longer required for nuclear installations the construction of which had already been authorised under the Atomic Energy Act This also explains why the proof of disposal requirement under Section 3 2 or Section 12.2 of the Federal Order does not apply to them The reasons for regulating waste disposal were valid in themselves, but were also for existing installations. In the licence to operate the nuclear power plant at Gösgen, granted on 29th September 1978, the Federal Department of Transport, Communications and Energy thus required presentation, by the end of 1985, of a project guaranteeing disposal On 22nd December 1978, the Federal Department added similar clauses to licences to operate the existing installations of Beznau I and Beznau II as well as Mühleberg. For Leibstadt, a similar condition was attached to the construction licence in the decision of the Federal Council rendered on appeal on 22nd August 1979. Contrary to a widely-held belief, the "Guarantee 1985" condition was not therefore imposed by legislation but by the authorities

Thus, proof of disposal is based on different legal provisions for the three categories of nuclear power plant:

a) Section 5 1 of the Atomic Energy Act, as implemented by the provisions of the licensing authorities for the existing power plants at Beznau, Mühleberg, Gösgen and Leibstadt proof to be supplied by the end of 1985;

b) Section 12 2 of the Federal Order concerning the Atomic Energy Act for the "transitional" installations of Kaiseraugst, Graben and Verbois proof to be supplied with the operating licence,

c) Section 3.2 of the Federal Order concerning the Atomic Energy Act, for other installations proof to be supplied with the general licence

For categories a) and b), a "project guaranteeing safe disposal" is required, whereas for category c), disposal must be "guaranteed" The deadline for presenting "Guarantee project 1985", prepared by Nagra, was dictated by category a) of existing installations, although the project is important also for categories b) and c)

The notion of "guarantee" is a widely used legal concept found not only in the law relating to nuclear energy but in other fields of law involving safety It is agreed that this concept usually means that safety must be assured, but it is not defined in either the Act or the Ordinance It is not even known with certainty whether there is any difference between the terms "guarantee" and "project guaranteeing" On several occasions in Parliament - in particular, on 6th March 1979, 2nd March 1981, 8th December 1981, 6th October 1982, 20th September 1984 and 18th September 1985 - the Federal Council has clarified what it requires in the way of proof of disposal.

In 1981, the Confederation Working Party for Nuclear Waste Management (AGNEB) also laid down a definition of "guarantee" After the DSN, in its expert opinion on the 1985 Guarantee project, kept to a fairly restrictive interpretation of the AGNEB definition, the definition chosen in May 1982 was as follows "The 'Guarantee' project must help dissipate the fundamental doubts as to the feasibility of the permanent disposal of waste. Without going as far as to expect, as would be the case for an implementation project, that the 'Guarantee' project itself solve the problem of the final disposal of waste, it must, however, present the Federal Council, on the basis of model examples, with a solution that is very likely feasible given the current state of science and technology"

At least as far as the final disposal of high-activity waste is concerned, the "Guarantee" project must be presented much earlier than a concrete project for the actual construction of a final repository, this means that the detail given in the "Guarantee" project must be somewhere between that corresponding to a conceptual study and that of a project accompanying the general licence application The following requirements apply in particular to the "Guarantee" project:

- The project must describe the feasible techniques for the safe disposal of all categories of waste, including any interim storage required for technical reasons Particular emphasis must be given to the project for the permanent disposal of high-activity waste, projects for the disposal of other waste categories may be dealt with in less detail

- The project for high-level waste should be based on the evaluation of drilling samples It may refer to a model site in a given area, but the properties of this site must be assessed realistically and in compliance with the results of the samples

- It must be shown, in a safety report, that the project would enable the protection objectives laid down by the safety authorities for

the permanent disposal of radioactive waste, to be attained The safety report should describe all the events, including accidents, which could result in radioactive materials from the final repository consituting a hazard to man or the environment, it should evaluate the consequences of each and assess how they would affect the protection objectives The main theme is the safety of the final repository after sealing Unlike the 1978 nuclear waste disposal concept, the project must not be based on unproven hypotheses, but must justify the hypotheses used by means of research results But while the "Guarantee" project cannot be expected to provide an answer to all the problems, the remaining uncertainties must not be such as to call into question the principle of the feasibility of permanent storage It is possible that some points will be clarified only on submission of the project for a general licence, following research conducted over several years In the case of the "Guarantee" project, account must be taken of this by exercising caution in safety analysis assumptions, and also, if appropriate, by increased use of protection barrier techniques.

It is up to the Federal Council to translate the assessment of the "Guarantee" by its scientific experts into a political conclusion If the Federal Council concludes that Nagra's "Guarantee" project provides the proof of disposal required, the condition in question is revoked for licences to operate existing installations. Were this to be the case, there would be no further obstacle to the granting of a licence to operate transitional installations, or to the granting of a general licence for new installations

If the Federal Council concludes that the feasibility of disposal has not been adequately proved, the licences for operating existing installations are revoked. The Federal Council may, however:

a) Prolong the deadlines; provision for this is made specifically in the conditions, where it is mentioned that a prolongation may be allowed in appropriate cases, for example to be able to carry out any supplementary drilling requested

b) Change the conditions materially. As the licensing authority, the Federal Council would be competent to make material changes to operating licences.

Existing installations are not subject to the same conditions as new or transitional installations, these falling within the scope of Sections 3 or 12 of the Federal Order concerning the Atomic Energy Act under the Act, the "Guarantee" is explicitly required so that the Federal Council cannot, on its own, change the requirements. The decision of the Federal Council should include serious legal, and energy and economic policy considerations Nor should it be forgotten that the proof of disposal is, in its extreme form in the "Guarantee", stricter than anything which has so far been required in other walks of life On 23rd January 1985, Nagra presented its project, within the time limit, to the Federal authorities The decision by the Federal Council on 4th September 1985 to prolong time limits does not yet constitute a material evaluation. It is a programming decision only, making it possible to proceed with a detailed expert study of the "Guarantee" project

submitted, and thereby to create the foundation for the material decision to be taken by the Federal Council

PREPARATORY MEASURES

Before being able to proceed with the construction of a radioactive waste repository, very extensive and detailed studies must show that the site chosen is a suitable one To do this, large-scale preparatory measures are required such as test-drilling and galleries, the construction of caverns in the rock, geophysical and hydrogeological research, etc. Nagra has already tried, in the first half of the 1970s, to conduct this type of research in anhydrite formations In early 1976, after it and the "underground repository consortium" responsible for research, had come up against considerable resistance in the cantons and communes concerned, Nagra submitted to the Federal Energy Office, applications for permission - under Section 4 1(a) of the Atomic Energy Act - to conduct drilling tests at the Stüblenen BE, Glaubenbühlen OW, Wabrig AG, Val Canaria TI and Le Montet VD, sites. It based its applications on an expert opinion that test-drilling or test caverns for the purpose of determining whether rock formations were suitable for the construction of a radioactive waste repository, were nuclear installations For protection against radiation, it would be necessary to make not only the completed repositories, but also, as soon as possible, the preparatory measures, subject to the licensing procedure under Federal law. The Federal Energy Office accepted the applications and started to implement the licensing procedure for nuclear installations, by requesting the cantons to state their position and the CSN to give an expert opinion, in pursuance of Section 7 of the Atomic Energy Act. The lack of legal regulations gave rise, however, to doubts as to how the applications should be processed, and the licensing procedure was interrupted

It is in this context that Section 10.2 of the Federal Order concerning the Atomic Energy Act is to be understood. This Section provides that the Federal Council, in the course of a special procedure, grants a licence to proceed with preparatory measures for the construction of a radioactive waste repository This clause was missing from the project of the Federal Council and was only added in that of the Commission of the National Council. On the basis of this clause, the Federal Council, on 24th October 1979, promulgated the Ordinance on preparatory measures for the construction of a radioactive waste repository

Preparatory measures include constructing exploration galleries and caverns in the rock, deep drilling, making geophysical studies, constructing test trenches, and undertaking tracing tests and hydrological, geological and other types of research The Ordinance regulates the way in which the application for a licence to proceed with preparatory measures must be submitted, and indicates what annexes must be attached for presentation to the Federal Department of Transport, Communications and Energy for submission to the Federal Council. The application consists essentially of a detailed research programme which must indicate the site, time and volume concerned In addition, a geological report is necessary to indicate all the results obtained as well as forecasts for future results An additional report must describe the foreseable effects of the preparatory measures as well as those

relating to construction, transport and clean-up Detailed provisions are laid down as to what must be contained in overall and site plans

The applications are published in the "Feuille federale" (Official Gazette) and made availabe for public inspection in the head towns of the cantons on whose territory the preparatory measures are envisaged, and are also submitted to the Federal Energy Office Landowners and other persons whose rights or obligations could be affected by the licence to proceed with preparatory measures are invited to make known any opposition or objections They are given sixty days in which to do this It is the Federal Act on Administrative Procedures which determines who is entitled to lodge opposition since, unlike the general licence procedure, not everyone is entitled to do so Cantons are consulted independently of the appeals procedures, and may, in addition to their reply, raise objections in their capacity as landowners or because they are affected in one way or another Applications are also submitted to the specialised services of the Confederation

Any objections, the replies from the cantons and any opposition together with the opinions of the specialised services of the Confederation are forwarded to the applicant so that he may reply to them or, if appropriate, amend the application. There are no rules as to the procedure to be followed should the applicant amend his application In any event, should the new project concern another site than that initially envisaged, or affect other people, fresh publication and a new public consultation procedure are required

So far, the applicant's reply has always been communicated to those having lodged objections After consideration by the authorities, other means of proof are also possible Thus, for example, an expert opinion has been requested from the Geology sub-group, and local inspections have been undertaken

No mention is made in either the Federal Order concerning the Atomic Energy Act or the Ordinance on preparatory measures, of what conditions determine whether a licence for the such measures is granted or not Until now, it was felt that the Confederation's task was in the first instance to examine whether the work envisaged could, by damaging the geological formations, call into question the construction of any final repository Moreover, environmental protection aspects were involved, and noise thresholds laid down. Questions relating to building permission, planning regulations, water protection, traffic and light emissions are, on the other hand, dealt with under the cantonal licensing procedure The decision also deals with questions relating to drilling and the plugging of boreholes In its decisions on the three applications for drilling on three potential sites for the permanent storage of low and medium level waste, the Federal Council for the first time gave an abstract opinion on the licensing criteria, distinguishing however three aspects:

- the prevention of damage to formations by a premature and harmful perforation of the rock,

- offering a choice of plausible sites,

- taking into consideration the effects on the human population and the environment of the preparatory measures as such

Since the promulgation of the Ordinance on preparatory measures, Nagra has submitted the following drilling applications or groups of applications:

a) On 15th November 1979, an application for six drillings from the gallery of the Grimsel power plant, to see whether this site was suitable for the construction of an underground laboratory in the rock The Federal Council granted the application on 25th June 1980

b) On 24th June 1980, twelve applications for a programme of seismic measurements followed by deep drilling in the north of Switzerland, with a view to preparing a site for a C-type final repository for high level waste, in the crystalline substratum For environmental protection reasons, Nagra subsequently decided not to go ahead with the site at Bachs, and applied instead for a licence in the neighbouring commune of Steinmaur The Federal Council granted the first eleven applications on 17th February 1982, and that for Steinmaur on 7th February 1983

c) On 21st December 1981, an application for the construction and operation of an underground laboratory at Grimsel The application was granted on 29th November 1982

d) On 22nd December 1983, three applications for drilling, test galeries and other studies in the communes of Ollon (VD), Bauen (UR) and Mesocco/Rossa (GR), with a view to constructing a B-type final repository for low and medium-level waste These applications were granted in part on 30th September 1985, the decision with respect to the test galleries and caverns being postponed In addition, Nagra was required to submit a preparatory measures request for at least one new site with fundamentally different features.

e) On 17th June 1987, an application for drilling, test galleries and caverns and other studies in the commune of Wolfenschiessen (NW), and for the conducting of geophysical studies in the valley of Engelberg (NW, partly OW) Permission has not yet been given.

The Confederation is responsible for ensuring compliance with licences and any reservations and conditions attached to them Section 19 of the Ordinance on preparatory measures provides that the Federal Council may entrust one or more specialised services of the Confederation with the task of monitoring preparatory measures For this purpose, the Federal Council has set up a Surveillance Commission for each site These bodies are made up of representatives of the cantons, communes, the Federal Energy Office, the Federal Environmental Protection Office and institutions working in the field of the earth sciences

Unfortunately, the law does not expressly stipulate whether a Federal Council licence for preparatory measures necessarily implies that all necessary conditions have been met, or whether, for example, building permission procedures at cantonal level, in which planning aspects would also

have to be decided, are still applicable. As the Federal Tribunal said in its decision of 24th April 1985, the first of these hypotheses would certainly be possible, given the extremely wide powers enjoyed by the Confederation in the field of nuclear energy, but would have to appear expressly or by analogy from the legislation, given the principle that, when powers are shared between the Confederation and cantons, they must be respected If, with regard to the implementation of preparatory measures, the Federal Parliament had wished to abolish the cantonal powers, this would have been clearly provided for in the Federal Order concerning the Atomic Energy Act. This, however, is not the case Consulting the cantons does not replace cantonal building permission procedures, and in particular, consideration of the issue of the site from the town and country planning viewpoint. What is true, however - and this was particularly emphasized in the Parliamentary debate - is that questions which have been definitively resolved in the Federal licensing procedure cannot be raised again in the procedure at cantonal level, they must not be misused to prevent the construction of nuclear installations This is why a popular decision that, for example, no nuclear installation or test drilling should be allowed in a given region will carry no weight in a cantonal licensing procedure, unless it is based on objective grounds relating in particular to town and country planning or building permission Any such popular decision would clearly be contrary to Federal law, which clearly states that radioactive waste storage sites in particular are in the public interest

TRANSFER OF THE RIGHT OF EXPROPRIATION

There is no general right of expropriation for nuclear installations Anyone wishing to construct such an installation is dependent on reaching agreement through negotiation, which can make the project impossible to carry out To help nuclear power plants and Nagra dispose of radioactive waste, the Federal Council therefore provided, in the Federal Order concerning the Atomic Energy Act, for the introduction of a right of expropriation with the possibility of transferring this right to third parties During the campaign preceding the popular vote on the Federal Order, this right of expropriation was one of the most controversial provisions. The right of expropriation may be exercised for the construction of a radioactive waste repository and also for the implementation of preparatory measures.

Section 5 of the Federal Expropriation Act specifies what may be expropriated. Rights in rem, within the meaning of this provision, include ownership and limited rights in rem. Preparatory steps in particular, do not usually require anything other than a provisional right to build As regards seismic measurements, a given piece of ground has, depending on the circumstances, to be penetrated or crossed once only If agreement cannot be reached with the owner, all that remains is the expropriation of a temporary right of way which, given the time taken by the procedure, makes such projects extremely difficult To protect a final repository from damage caused by third parties, expropriation in order to obtain servitudes banning building in the neighbourhood, could be relevant But expropriation may also be exercised in relation to the obligations of a property owner to his neighbours Rights over property used for public purposes may also be expropriated, for example, rights over land belonging to a commune or a canton

The use of the right of expropriation is, however, to be avoided as far as possible, and has, moreover, never yet proved necessary But if Nagra had to resort to this right, it could not implement its projects immediately since it is not entitled to expropriate as a matter of right; it first needs a special expropriation licence granted by the Federal Council The law is silent as to when the application for the grant of the right to expropriate may be filed As concerns preparatory measures, the application may be made either at the same time as the licensing request, or separately

CONSTRUCTION AND OPERATION OF A FINAL REPOSITORY

Anyone wishing to obtain a licence to construct and operate a repository must first have a general licence The following description of the procedures required for the granting of a licence to construct a repository is given subject to the reservation that the Atomic Energy Act, as completely revised, be applied in relation to these procedures.

General licence

Applications must be submitted in writing to the Federal Chancellery They must include the information necessary for the granting of a general licence A description must be made of the site, the main features of the project, storage capacity, waste categories and the approximate form of underground or surface construction.

The Federal Council publishes the application in the "Feuille Fédérale" and makes the documents available for public inspection in good and due form. The documents are made available in the head town of the canton where the site is located, in the Federal Energy Office and in communes sharing a border with the commune where the site is located Any member of the public may, within ninety days of submission to the Federal Chancellery, object in writing to the granting of a general licence

The cantons and relevant specialised services of the Confederation send their opinions to the Federal Council, which fixes an equitable deadline for this purpose Cantons must also obtain the viewpoints of the communes concerned, and reproduce these in their own opinions The time limit for consultations is ninety days from publication of the application.

The Federal Council asks for expert opinions. These must deal in particular with Switzerland's national security, compliance with any public international law commitments, the protection of the population, other people's property or important rights, including protection of the environment and the countryside and nature conservation, as well as land use. The cost of such expert opinions is usually borne by the applicant

The Federal Council publishes the results of the consultations and expert opinions in the "Feuille Fédérale" and makes them available, in good and due form, for public inspection Any person may, within a time limit of ninety days from publication, lodge objections in writing to these conclusions, with the Federal Chancellery The Federal Council then invites the cantons, Federal services and experts to review, within a time limit fixed by it, their conclusions in the light of the objections

The Federal Council then examines the application together with the various opinions and objections, before taking its decision If this decision is positive, it is published in the "Feuille Fédérale" with any conditions and reservations attached to it together with an explanatory report, then submitted to the Federal Assembly for approval There is no appeal against the granting or refusal of a general licence

Licence to construct a nuclear installation

Following the granting of a general licence, the applicant submits a technical (safety) report about the planned installation to the Federal Department of Transport, Communications and Energy

The Department forwards this application, together with the safety report, to the Federal Commission for the Safety of Nuclear Installations (CSN) This Commission gives its opinion as to whether all the necessary and foreseable safety measures, in the light of the current state of science and technology for the construction and operation of nuclear installations, have been taken for the protection of the population, property and important rights The canton in which the site is located adds its opinion to that of the CSN. The Federal Council then takes the final decision

Operating licence

Construction of a nuclear installation proceeds under the permanent surveillance of the Confederation, until the installation is ready for a trial operation, for which a special licence is required.

If the trial operation gives rise to no objections, the operating licence can finally be granted. The installation remains under constant surveillance during operations.

OPINION OF THE CANTONS

There are several examples in the field of atomic energy where federal law provides that the opinion of the cantons must be obtained before a licence is granted These include the following·

- Section 7.2 of the Atomic Energy Act: opinion of the canton in which the site is located before the granting of licences to construct, operate or alter a nuclear installation,

- Section 6 1 of the Federal Order cantons must be consulted before the general licence is granted;

- Section 7.4 of the Federal Order cantons are invited to comment on any objections raised to their conclusions,

- Section 10.2 of the Federal Order and Section 15 of the Ordinance on preparatory measures the canton where the site is located must be consulted before the granting of a licence to proceed with preparatory measures

The cantons of Berne, Glaris, Neuchâtel, Schaffhausen, Vaud, Zurich and Nidwald have provided, in their constitutional law, for public participation in this type of consultation Thus, the opinion of the canton sent to the Confederation with regard to buildings intended for the production of nuclear energy or the preparation of sites for radioactive waste repositories may be made subject to the following procedures optional referendum, mandatory referendum, voting or, as recently, "Landsgemeinde" voting (raising of hands in a public forum).

Regulation of the procedure through which the canton's position is determined, and in particular the designation of the body competent to adopt this position, falls entirely within the jurisdiction of cantonal law In Federal atomic energy law, there are no provisions specifying the type of procedure the cantons must adopt in this respect Neither the Federal Council nor the Federal Assembly has found anything which would not have been allowed under the rules guaranteeing the constitutions of the cantons in question, this applies also to the Federal Tribunal with regard to cantonal provisions on this topic. It is therefore permitted in law to envisage use of a referendum for the adopting of cantonal positions in the field of atomic energy law, to be submitted to the Confederation, or to let the "Landsgemeinde" decide But as far as the Confederation is concerned, positions adopted by cantons are not legally binding opinions The Confederation may ignore them and promulgate a nuclear energy provision which is in contradiction with the opinion of the canton One of the problems raised by popular referenda regarding the positions of the cantons to be submitted to the Confederation is that, although the citizen is asked to vote, he does not have the real power of decision

THIRD PARTY LIABILITY

The Act of 18th March 1983 on Nuclear Third Party Liability entered into force on 1st January 1984 and replaces the provisions which had until then regulated third party liability, insurance and severe accidents, contained in the Atomic Energy Act of 23rd December 1959

The Act regulates third party liability in the event of nuclear damage caused by nuclear installations or by the transport of nuclear substances, as well as cover for such damages It does not apply to damage caused by radioisotopes used or intended to be used outside a nuclear installation for industrial, agricultural, medical or scientific purposes The Federal Council may exempt nuclear substances of low radioactivity from the scope of the Act. There is absolutely no doubt that a final radioactive waste repository is, during its operational phase, a nuclear installation within the meaning of the Act on Nuclear Third Party Liability The operator and the owner of a final repository are jointly liable without limit for nuclear damage They remain liable even if the damage was caused by exceptional natural phenomena or as a result of war. The operator of a nuclear power plant is not held liable if he proves that the injured person caused the damage intentionally, he may be freed from all or part of his liability if he proves that the injured person caused the damage through his own negligence

The operator must insure his nuclear installation with a private insurer for at least SF 400 million, and with the Confederation - which must

intervene in certain cases - for up to SF 1 billion When nuclear substances are transiting Switzerland, each transport operation must be insured for at SF 50 million Ten per cent must be added to each of these sums to cover interest payable and procedural costs If there are grounds for anticipating that the financial resources of the person liable, the private insurer and the Confederation will not be sufficient to satisfy all claims (in the event of a major occurrence), the Federal Assembly establishes an ad hoc indemnity scheme. The Act on Nuclear Third Party Liability also regulates the procedure and reciprocity with regard to damages occurring abroad or affecting persons resident abroad

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ANNEX

RELEVANT LEGISLATION

Federal Constitution of the Swiss Confederation of 29th May 1874

Section 24 quinquies

1. **Legislation on atomic energy shall be the responsibility of the Confederation.**

2 **The Confederation shall promulgate provisions relating to protection against ionizing radiation.**

Federal Act on the Peaceful Uses of Atomic Energy and Protection Against Radiation of 23rd December 1959

Chapter 1: Definitions and incentives

Section 1

1. **Atomic energy is defined as any form of energy released during nuclear processes**

2 Atomic installations (nuclear installations) are defined for the purposes of this Act as installations serving to produce atomic energy or to obtain, treat, store or render inoffensive nuclear fuels and radioactive waste

3 The Federal Council may, by Ordinance, define the concepts of nuclear fuel and waste as well as other concepts used in this Act

4 The Federal Council may treat integral parts of atomic installations which become radioactive during the production of atomic energy, as similar to waste It may provide for exemptions from the provisions of this Act dealing with licensing, third party liability and compulsory insurance, for low-level nuclear fuels and waste

Chapter 2: Administrative measures

Section 4

1 A licence from the Confederation shall be required:

a for the construction and operation of an atomic installation and for any change in the purpose, nature or size of such installation,

b for the transport, delivery and reception, and for any other form of possession of nuclear fuels and radioactive waste,

c for the import, transit and export of nuclear fuels and radioactive waste,

d for the export of energy produced by atomic installations.

3 Nothing in this Act shall affect the powers of the police of the Confederation and of the cantons, in particular as concerns buildings, fire, water and the surveillance of war material, or any measures contained in other import, export or transit provisions

Section 5

1 The licence must be refused or made subject to appropriate conditions or obligations if this is necessary for Swiss national security and compliance with its international commitments or for the protection of the population, other people's property or important rights.

Federal Order concerning the Atomic Energy Act of 6th October 1978

Part 1: General licence

Section 1 Object, competence and content

1 A general licence from the Federal Council must first be obtained by anyone intending to construct an atomic installation within the meaning of Section 1 2 of the Federal Act of 23rd December 1959 on the Peaceful Uses of Atomic Energy and Protection against Radiation (Atomic Energy Act); the granting of this licence is subject to approval by the Federal Assembly The construction of installations to be used by Federal establishments or

institutes for research and educational purposes shall be regulated by the provisions applicable to such establishments and institutes

2 The prior delivery of a general licence is a pre-condition for the granting of construction and operating licences under Section 4 1 a of the Atomic Energy Act.

3 The general licence shall specify·

a the site,

b the main outline of the project, in particular

2 in the case of radioactive waste repositories, their storage capacity, the categories of waste concerned as well as the approximate structure of underground and surface constructions

Section 3 Conditions

1 The general licence must be refused or made subject to appropriate conditions or requirements when

a this is required for protecting Switzerland's national security, fulfilling its international commitments, protecting the population, other people's property or important rights, including the interests vested in the protection of the environment, of nature and of the countryside, as well as land use planning,

b the installation or the power to be generated therein is not likely to meet a real need in the country, when determining such need, account should be taken of possible savings, the replacement of oil and the development of other forms of energy.

2. The general licence for nuclear reactors is granted only if the safe and long-term disposal as well as final storage of the radioactive waste from the installation concerned are guaranteed and if arrangements have been made for the decommissioning and possible dismantling of the disused buildings

Part 2: Radioactive waste and Fund for Decommissioning Costs

Section 10 Radioactive waste

1 Any person producing radioactive waste must ensure its safe disposal and bear the cost thereof; the Confederation reserves the right to have the radioactive waste disposed of at the producer's expense

2. The Federal Council grants permission under a special procedure to take preparatory measures to prepare a repository for radioactive waste It submits the application to the canton on whose territory the preparatory measures are to be taken and gives it a reasonable time in which to reply

3 The Federal Council settles the arrangements It may require producers of radioactive waste to belong to a body set up under public law and to pay equitable contributions to meet the expenses of disposing of the waste

4. The Federal Council may, where necessary, transfer the right of expropriation to third parties

Part 3: Final provisions

Section 12 Transitory provisions

1 A general licence is no longer required for atomic installations in operation or whose construction has been licensed in accordance with the Atomic Energy Act

2 In the case of atomic installations whose operators have obtained a site licence but not yet a construction licence, the authority simply considers, under a simplified procedure for granting a general licence, whether the power generated by the installation is likely to meet a real need in the country; when determining such need, account should be taken of possible savings, the replacement of oil and the development of other forms of energy The licence to operate such installations will be granted only when there is a project guaranteeing the safe long-term disposal and permanent storage of the radioactive waste produced and when arrangements have been made for the decommissioning and possible dismantling of disused installations.

Section 13 Referendum, entry into force and period of validity

1 This Order, whose scope is general, shall be submitted to an optional referendum

2 The Federal Council shall fix the date of its entry into force

3 This Order shall remain valid until the entry into force of a new Atomic Energy Act, but no later than 31st December 1983.

Section 14 Extension

The validity of this Order is hereby extended until 31st December 1990.

Ordinance on preparatory measures for the construction of a radioactive waste repository (Ordinance on Preparatory Measures) of 24th October 1979

The Swiss Federal Council,

Having regard to Section 37 1 of the Federal Act of 23rd December 1959 on the Peaceful Uses of Atomic Energy and Protection against Radiation;

Having regard to Section 10 3 and 4 of the Federal Order of 6th October 1978 concerning the Atomic Energy Act,

Provides as follows

Chapter 1: General provisions

Part 1: Licence

Section 1 Object

1 A licence from the Federal Council is required before undertaking any preparatory measures within the meaning of Section 10 2 of the Federal Order of 6th October 1978 concerning the Atomic Energy Act (Federal Order)

2 Preparatory measures within the meaning of Section 15 of the Federal Act on Expropriation (Expropriation Act) are exempt from this provision

Section 2 Scope of licence

The granting of a licence to proceed with preparatory measures in no way implies a right to a licence to construct a radioactive waste repository

Chapter 3: Procedure

Section 14 Publication of the application

1. The Department publishes the application in the "Feuille Federale" and deposits it in the head towns of the cantons on whose territory the preparatory measures are to be implemented, as well as with the Federal Energy Office

2 In the publication, the Department invites owners or other persons whose rights or obligations could be affected by the granting of a licence to proceed with preparatory measures, to make known any opposition or objections It shall allow them a reasonable time in which to do this

Section 15 Consultation of the cantons and the competent specialised services of the Confederation

1 At the same time as it publishes the application, the Department submits it to the cantons on whose territory the preparatory measures are to be implemented, and to the competent specialised services of the Confederation

2. It shall allow them a reasonable time in which to give their opinion

Section 16 Applicant's right of reply

On expiry of the deadline, the Department shall give the applicant a reasonable period in which to reply and, where appropriate, amend the application

Section 17 Decision

The Department shall forward to the Federal Council the application, any objections and oppositions presented, together with the opinions and expert reports, accompanied by a draft decision

Section 18 Period of validity of the licence

The Federal Council shall fix the period for which the licence to proceed with preparatory measures shall remain valid

Chapter 4: Surveillance

Section 19

1 The Federal Council may make one or more specialised services of the Confederation responsible, in collaboration with the cantons on whose territory the preparatory measures are to be implemented, for the surveillance of such measures, including any prior or subsequent work

2 Persons responsible for surveillance shall be entitled at any time to check whether the requirements relating to the protection of the population, other people's property or important rights, the protection of nature and the countryside, of water and air, as well as noise abatement, are being complied with For this purpose, they may in particular require information, communications and special documentation, they may also ask to see any of the relevant documents To the extent required for the carrying out of their tasks, they shall enjoy free access to all installations as well as to all business and storage premises

Chapter 5: Transfer of the right of expropriation

Section 20

1. Failing agreement between the applicant and the owner or other person whose rights or obligations could be affected by the granting of a licence to proceed with preparatory measures, the Federal Council may, if necessary, transfer to the applicant the right of expropriation (Section 10.4 of the Federal Order) The Expropriation Act shall be applicable

2. A request to be given the right of expropriation may be submitted independently of the application

Chapter 6: Entry into force

Section 21

This Ordinance shall enter into force on 15th November 1979

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Tchernobyl et le problème des obligations internationales relatives aux accidents nucleaires, by Pierre Strohl, Politique Etrangère, Institut français des relations internationales (IFRI), No. 4, Paris, 1986, pp 1035-1054

This article by the Deputy Director General of the OECD Nuclear Energy Agency analyses the accident at Chernobyl in the context of obligations of States under international and nuclear law. This accident is in effect the first to have put international nuclear law to the test, namely, all the agreements, directives, standards, recommendations, guidelines and codes of practice prepared by the States to prevent nuclear accidents and to overcome their consequences

This analysis completes the considerable series of articles on the different aspects and consequences of the Chernobyl accident published in the preceding issue of Politique Etrangere (No. 3/86).

Pierre Strohl first examines the guiding principles which form the basis of international nuclear law and discusses, with regard to accident prevention and the effects of such accidents, the existing regulations when the Chernobyl accident occurred; these concern the safety of nuclear installations, protection against ionizing radiation and third party liability

Having noted that the mechanisms set up by international nuclear law functioned poorly when the Chernobyl accident took place, the author then explores the causes of this ineffectiveness He also examines whether other international rules, in particular, general international law or the provisions of international environmental law on long-distance atmospheric pollution and transfrontier pollution could have applied to this accident as regards prevention (mandatory emergency notification and organisation of international assistance to limit risks) as well as compensation of damage He concludes that these provisions are insufficient because they are either too general or else too limited in scope; also in addition to their mandatory character being uncertain, their implementation is complex and practically impossible without even a minimum of co-operation from the State where the accident occurred

Finally, the author describes the present orientations of modernised international nuclear law As regards actions in case of an accident, the results were quick, due to the adoption of two international Conventions in September 1986: the first on early notification of a nuclear accident and the second on assistance in case of a nuclear accident or radiological emergency

The adaptation of existing international standards is also discussed· debate on the need for mandatory safety standards, greater harmonization of radiation protection criteria for selection of countermeasures in emergency situations, and widening of the conventional third party liability regime. The author considers that nuclear law has progressed considerably since Chernobyl and that it will continue to evolve towards stronger international obligations and closer links between neighbouring countries.

Bibliographie "Droit nucleaire", published by the Centre d'etudes du droit de l'energie atomique de l'Institut de Droit comparé de Paris, 1988, 97 pages

This bibliography on nuclear law was prepared by the Centre d'etudes du droit de l'énergie atomique (Atomic Energy Law Study Centre) de l'Institut de droit comparé de Paris. This bibliography compiled by Mme Mallavialle, research engineer at the Centre National de Recherche Scientifique - CNRS (National Scientific Research Centre), lists publications published in 1985 and 1986

Articles, books and documents are set out separately. Articles and books are divided under two headings peaceful uses and military uses The title "utilisation pacifiques" itself contains several subtitles generalities, nuclear law, bilateral co-operation, international co-operation, national programmes The articles and books mentioned under "utilisations militaires" are also sorted out according to several themes generalities, non-proliferation of nuclear weapons, international control policy, nuclear policies, nuclear-free zones.

• *Federal Republic of Germany*

Verhältnis der Zivilhaftungskonventionen für Atom-und Ölverschmutzungschäden zur völkerrechtlichen Haftung, by Angelika Hoche, München: Verlag V. Florentz 1988, X, 370 pages (Europarecht-Völkerrecht, Studien und Materialien, Vol 18)

This book is of topical interest, it deals with third party liability conventions in the nuclear field and in the oil pollution field and their relation with State responsibility under public international law The author thoroughly analyses the existing conventions and customary law She comes to the conclusion that the strict separation of civil law and of public international law claims, which allows parallel and separate action, may lead to the problem of dual payment of compensation Considering that the item of State responsibility is currently on the agenda of the IAEA, the book merits careful study

Rechtsprobleme der atomaren Entsorgung Unter besonderer Berücksichtigung des Rechtsschutzes, by Christoph Rabben, Köln· Carl Heymanns Verlag 1988, XXVII, 195 pages (Studien zum öffentlichen Wirtschaftsrecht, Vol 2)

The author investigates legal problems concerning the back-end of the fuel cycle, so-called "Entsorgung", according to the law of the Federal Republic of Germany, excluding nuclear third party liability questions He focuses on three main aspects in relation to Entsorgung· administrative law, constitutional law and legal protection, i e remedies against decisions related to Entsorgung The last point, in particular, deserves special attention because this item has rarely been dealt with until now

• *Spain*

Jornadas de Estudio Sobre Presente y Futuro de la Legislacion Española en Materia de Energia Nuclear, Consejo de Seguridad Nuclear, Facultad de Dercho de la Universidad Complutense, Asociacion Internacional de Derecho Nuclear, Madrid, 1988, 120 pages

This publication contains the reports presented at a Symposium organised in Madrid, on 29th and 30th September 1986, by the Law Faculty of the Complutense University in Madrid The meeting was also sponsored by the National Uranium Enterprise (ENUSA). The topic discussed was the present and future situation of Spanish nuclear legislation.

The first session was devoted to exposes on Spanish nuclear legislation The licensing procedure and administrative control of the use of nuclear energy was the subject of the second session which also considered the legal aspects of control and surveillance of nuclear installations The role of international co-operation in this field, particularly after the Chernobyl accident, was examined in the framework of the third session on nuclear third party liability. This session also dealt with insurance coverage for nuclear third party liability under Spanish legislation.

The rapporteurs of the fourth session attempted to outline the future trends of nuclear legislation, in particular, regarding the long-term management of radioactive waste.

The conclusions for each session are presented separately at the end of the publication.

• *Sweden*

Radiation protection and atomic energy legislation in the Nordic countries, by Lars Persson, SSI-rapport 87-34, Statens strålskyddsinstitut (National Institute of Radiation Protection), Stockholm, 1987, 103 pages

This useful and interesting report contains English translations of the radiation protection and atomic energy laws of Denmark, Finland, Iceland, Norway and Sweden as at 1st March 1984. The Annex to the report reproduces more recent radiation protection legislation passed in Iceland which entered into force in 1986 (see Chapter on Legislative and regulatory activities in this issue of the Bulletin).

In addition, as a background to this legislation, a review of Nordic co-operation is provided, with an analysis of the common basis for the legal texts Some historical remarks on the legislation of each country and the comptent authorities are included in the presentation

Finally, also included in this report, are translations of the Nordic Agreements on co-operation in the field of nuclear safety and radiation protection

• *United Kingdom*

Advisory Committee on the Safe Transport of Radioactive Materials; Transport of Radioactive Materials for Medical and Industrial Use, published by Her Majesty's Stationery Office, London, 1987, 37 pages

This is the first report of the United Kingdom Advisory Committee on Transport of Radioactive Materials which was established in 1985 to provide independent advice to the Secretary of State for Transport and the Health and Safety Commission on the arrangements for the safe transport of civil radioactive materials. It concerns the transport of radioactive materials for use in hospitals and conventional industrial applications, but not for the nuclear energy industry which accounts for a small proportion of total traffic

The Report considers the practices relevant to the safety of the transport against the background of the legal framework. It is divided into eight chapters plus conclusions and recommendations After describing the uses, users and transport of radioactive materials, chapters 2 and 3, the Report examines the applicable transport regulations including packaging requirements, chapter 4. These include the national regulations made to give effect, in the United Kingdom, to the regulations of the International Atomic

Energy Agency Radiation exposure, both under normal transport conditions and in circumstances of accidents and incidents is outlined in chapter 5 Chapter 6 discusses contingency plans and emergency arrangements, chapter 7, the training of workers on radiation protection and chapter 8, minimising exposures

The Report concludes that operators have generally acted successfully and responsibly in compliance with the regulatory standards It goes on to recommend, inter alia, that the United Kingdom should continue to support strongly the work of international agencies concerned with the transport of radioactive materials, that employers should ensure that sufficient training on radiation safety is provided and that regular reviews to check compliance with regulatory requirements for doses be established

Chernobyl Law and Communication, Philippe Sands (Ed), Grotius Publications Limited, Sales Department, Cambridge, CB3 9PB, 1988, 312 pages

This work presents a compilation of legal materials produced by States, international organisations and writers relevant to the legal issues arising out of the Chernobyl accident These texts are supplemented by a substantial introduction, in which the editor identifies and discusses these legal issues, under the headings of prevention, liability, information and assistance, and explains the relevance of the chosen materials. Each text is further supplemented by a short note covering its background and highlighting its main features There is also a selected general bibliography

• *OECD*

Regulating New Technologies: Lessons from Nuclear Energy, by Pierre Strohl in The OECD Observer, No. 151, April/May 1988, OECD, Paris, pages 17-19

This other article by the Deputy Director-General of the NEA, considers the matter of legal innovations in the nuclear energy field and proposes that lessons learnt in this field may be instructive in relation to regulatory action in other new technology fields

The author's comments focus first on the themes of international co-operation and secondly on law and technological maturation With respect to the former, the author refers to achievements in the nuclear field and also the shortfalls which were highlighted by the Chernobyl accident He emphasises that co-operation between countries is equally vital for other technologies, either because of inherent transborder effects, as in the field of space and telecommunications, or because mankind as a whole is concerned, as in the field of biotechnology Accordingly, he suggests that the

experience gained in the search for original ways of controlling the risks from nuclear energy might be useful in other activities

With respect to the relationship between law and technological maturation, the author identifies the importance of, and also the difficulties in, evenly pacing technological advances and legal developments. He proposes that multidisciplinary exchanges, not just between scientists and engineers, but also between experts in human sciences, economic experts and political leaders, be undertaken In the author's view, these, combined with determined co-operation between governments under the aegis of the appropriate international organisations, would pave the way for the development of a legal system aimed at protecting man against the abuse of technology

The author also discusses the relationship between the mass media and new technologies He addresses this issue because, as he states, informing the public cannot be dissociated from the regulatory policies The author considers that, in a society dominated by the mass media, active information campaigns are required to ensure that the public is properly informed He refers with concern to the difficulties in communication between specialists and the public, as illustrated by the gap between the expansion of nuclear programmes and their acceptance by the public

• *IAEA*

Convention on Early Notification of a Nuclear Accident and Convention on Assistance in the Case of a Nuclear Accident or Radiological Emergency, Legal Series No 14, IAEA, Vienna, 1987, 126 pages

This publication contains the texts of the above Conventions, both adopted on 26th September 1986 at a Special Session of the IAEA General Conference. Also included is the background material relating to the process of their negotiation and conclusion

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NUCLEAR LAW
Bulletin

S U P P L E M E N T TO No. 41

FINLAND

NUCLEAR ENERGY ACT OF 11TH DECEMBER 1987

NORWAY

ACT NO. 28 OF 12TH MAY 1972 CONCERNING NUCLEAR ENERGY ACTIVITIES
AS AMENDED ON 20TH DECEMBER 1985

June 1988

Finland

NUCLEAR ENERGY ACT*
(11th December 1987)

In accordance with a decision of Parliament, made as prescribed by Section 67 of the Parliament Act, the following is enacted:

CHAPTER 1 - PURPOSE AND SCOPE OF THE ACT

Section 1 - Purpose of the Act

To keep the use of nuclear energy in line with the overall good of society, and in particular to ensure that the use of nuclear energy is safe for man and the environment and does not promote the proliferation of nuclear weapons, this Act prescribes general principles for the use of nuclear energy, the implementation of nuclear waste management, the licensing and control of the use of nuclear energy and the competent authorities.

Section 2 - Scope of the Act

This Act shall apply to:

1) the construction and operation of nuclear facilities;

2) mining and enrichment operations aimed at producing uranium or thorium;

3) the possession, fabrication, production, transfer, handling, use, storage, transport, export and import of nuclear materials and nuclear wastes as well as the export and import of ores and ore concentrates containing uranium or thorium;

4) in the cases specified in the third subsection of this Section, the possession, transfer, export and import of materials, devices and equipment referred to therein as well as nuclear information;

5) in cases to be prescribed by decree, the conclusion and execution of civil agreements, for implementation outside of Finland in regard to any of the activities referred to in subsections 1-4 of Section 1,

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* Unofficial translation by the Finnish authorities.

with a foreign state, a foreigner or a foreign-based corporation, should the agreement have pertinence to the proliferation of nuclear weapons or should the obligations under Finland's international treaties in the field of nuclear energy have bearing on the agreement.

It may be prescribed by decree that some parts of the provisions of this Act shall not apply to activities referred to in points 1-3 and 5 of subsection 1 should those activities have little significance to the purpose of this Act.

In cases where the materials, devices, equipment or information referred to hereunder have (has) pertinence to the proliferation of nuclear weapons or have (has) bearing on Finland's international treaties in the nuclear energy sector, the application of this Act may be extended, by decree, to:

1) non-nuclear materials, in cases where their properties are particularly well suited for obtaining nuclear energy;

2) devices or equipment intended or particularly well suited for use in nuclear facilities;

3) devices or equipment intended or particularly well suited for use in the fabrication of nuclear materials or materials referred to in point 1;

4) special equipment essential to the manufacture of devices and equipment referred to in points 2 and 3; and

5) nuclear information that is in written or other physical form and is not generally available.

Section 3 - Definitions

In this Act:

1) **use of nuclear energy** shall refer to operations specified in subsection 1 of section 2;

2) **nuclear material** shall refer to special nuclear materials and source materials, such as uranium, thorium and plutonium;

3) **nuclear waste** shall refer to:

   a) radioactive waste generated in connection with or as a result of the use of nuclear energy; and

   b) materials, objects and structures which, having become radioactive in connection with or as a result of the use of nuclear energy and having been removed from use, require special action because of the danger arising from their radioactivity;

4) **nuclear waste management** shall refer to all measures necessary to recover, store and handle nuclear wastes and dispose of them **(disposal)**;

5) **nuclear facilities** shall refer to facilities necessary for obtaining nuclear energy, including research reactors, facilities performing extensive disposal of nuclear wastes, and facilities used for extensive fabrication, production, use, handling or storage of nuclear materials or nuclear wastes; nuclear facilities, however, shall not refer to:

   a) mines or enrichment plants intended for the fabrication of uranium or thorium, or the premises and places, including their precincts, where the nuclear wastes derived from such facilities are stored, or their repository; or to

   b) premises permanently shut down which contain nuclear wastes, enclosed there in a manner approved as permanent by the Finnish Centre of Radiation and Nuclear Safety;

6) **physical protection** shall refer to the measures needed to protect the use of nuclear energy against illegal activities in the nuclear facility, its precincts, other places or vehicles where nuclear energy is used; and

7) **emergency planning** shall refer to the measures needed to reduce nuclear damage at the nuclear facility, in its precincts, in other places or in vehicles where nuclear energy is used.

CHAPTER 2 - GENERAL PRINCIPLES

Section 4 - Nuclear explosives

Import of nuclear explosives as well as their fabrication, possession and detonation in Finland are prohibited.

Section 5 - Overall good of society

The use of nuclear energy, taking into account its various effects, shall be in line with the overall good of society.

Section 6 - Safety

The use of nuclear energy must be safe; it shall not cause injury to people, or damage to the environment or property.

Section 7 - Physical protection and emergency planning and other comparable arrangements

Sufficient physical protection and emergency planning as well as other arrangements for reducing nuclear damage and for protecting nuclear energy against illegal activities shall be a prerequisite for the use of nuclear energy.

CHAPTER 3 - OBLIGATIONS ARISING FROM THE LICENSING REQUIREMENT

Section 8 - Obligation to apply for a licence

The use of nuclear energy without the licence prescribed by this Act is prohibited.

On request, the Ministry of Trade and Industry must give a binding advance ruling as to whether the intended activity requires that a licence be applied for.

Section 9 - Licence-holder's obligations

It shall be the licence-holder's obligation to assure the safe use of nuclear energy.

It shall be the licence-holder's obligation to assure such physical protection and emergency planning and other arrangements, necessary to ensure reduction of nuclear damage, which do not rest with the authorities.

A licence-holder whose operations generate or have generated nuclear waste (a licence-holder with a waste management obligation) shall be responsible for all nuclear waste management measures and their appropriate preparation, and is responsible for their costs (waste management obligation).

Section 10 - Continuation of obligations

Cancellation of a licence or expiration of its validity shall not release the licence-holder, or one who has had a licence, from compliance with what has been prescribed in or under Section 9 and Chapters 6 and 7 or in the licence conditions.

CHAPTER 4 - THE COUNCIL OF STATE'S DECISION IN PRINCIPLE

Section 11 - Decision in principle

Construction of a nuclear facility of considerable general significance

shall require the Council of State's decision in principle that the construction project is in line with the overall good of society.

Of the nuclear facilities referred to in point 5 of Section 3, those of considerable general significance are:

1) facilities operated for the production of nuclear energy having a thermal power greater than 50 megawatts;

2) facilities serving as repositories for nuclear waste; and

3) facilities operated for purposes other than the generation of nuclear energy having, at a given moment, an amount of nuclear material or waste or involving a radiation risk, as shall be prescribed in a decree, that shall be deemed comparable with nuclear facilities as defined in point 1.

Section 12 - Application for a decision in principle and the required documentation

A decision in principle by the Council of State shall be applied for by submitting an application, for which the Ministry of Trade and Industry must obtain a preliminary safety assessment from the Finnish Centre of Radiation and Nuclear Safety and a statement from the Ministry of the Environment as well as from the municipal council of the municipality intended to be the site of the facility and from its neighbouring municipalities.

Section 13 - General hearing

Before the decision in principle is made, the applicant shall make generally available to the public an overall description of the facility, the environmental effects it is expected to have and its safety; such documentation, compiled according to instructions by the Ministry of Trade and Industry, shall be checked by the Ministry before it is made public.

The Ministry of Trade and Industry shall give residents, and municipalities and local authorities in the immediate vicinity of the nuclear facility, the chance to present their opinions in writing before the decision in principle is made. Furthermore, in a way the Ministry can specify in more detail, the Ministry shall arrange a public gathering in the municipality where the planned site of the facility is located and during this gathering the public shall have the opportunity to give their opinions either orally or in writing. Opinions that have been presented must be made known to the Council of State.

Section 14 - Consideration of the decision in principle by the Council of State

Before making the decision in principle referred to in Section 11, the Council of State shall ascertain that the municipality intended to be the site of the nuclear facility, in its statement referred to in Section 12, is in favour of the facility and that no factors indicating a lack of sufficient

prerequisites for constructing a nuclear facility, as required in Section 6, have arisen.

Should the Council of State find that the prerequisites prescribed in subsection 1 have been met, it shall, in reaching its decision in principle, consider the issue from the perspective of the overall good of society, and shall take into account the benefits and drawbacks arising from the nuclear facility, paying particular attention to:

1) the need for the nuclear facility project with respect to the country's energy supply;

2) the suitability of the intended site of the nuclear facility and its effects on the environment; and

3) arrangements for the nuclear fuel and waste management.

Section 15 - Notification to Parliament and Parliament's decision

The Council of State's decision in principle, made under Section 11, in which the construction of the nuclear facility is judged to be in line with the overall good of society shall be forwarded, without delay, to Parliament for perusal. Parliament may reverse the decision in principle as such or may decide that it remains in force as such.

Before Parliament has made its decision, the applicant shall not initiate measures prescribed by the decree which, because of their economic significance, might impede Parliament's, or the Council of State's, possibilities to decide at its discretion.

CHAPTER 5 - LICENSING

Section 16 - Licensing authorities

Licences to construct and operate a nuclear facility as well as for mining and enrichment operations the purpose of which is the production of uranium or thorium are granted by the Council of State.

A licence for the use of nuclear energy other than referred to in subsection 1 is granted by the Ministry of Trade and Industry. Granting of such licence may be delegated by decree to the Finnish Centre of Radiation and Nuclear Safety.

Section 17 - Licence-holder

A licence to use nuclear energy may be granted only to Finnish citizens, Finnish corporations or foundations or to government authorities.

For special reasons, foreign corporations or authorities may be granted a licence:

1) to transport nuclear material or nuclear waste within Finland;

2) to carry out imports or exports in connection with transit via Finland of nuclear material, nuclear waste, or ores or ore concentrates containing uranium or thorium; and

3) for temporary operation of a nuclear facility within Finland, as referred to in subsection 1 of Section 22.

A licence to possess, use, transport, export or import nuclear material or nuclear waste may, in connection with control activities, also be granted to an international organisation or foreign authority responsible for the control required by international treaties binding on Finland.

Section 18 - Construction of a nuclear facility having considerable general significance

A licence to construct a nuclear facility referred to in Section 11 may be granted:

1) when a decision in principle, as referred to in Section 11, has deemed the construction of a nuclear facility to be in line with the overall good of society, and Parliament has decided that the decision in principle remains in force; and

2) when the construction of a nuclear facility also meets the prerequisites for granting a construction licence for a nuclear facility as prescribed in Section 19.

Section 19 - Construction of other nuclear facilities

A licence to construct a nuclear facility other than referred to in Section 18 can be granted:

1) if plans concerning the nuclear facility, its central systems and components entail sufficient safety and protection of workers and the population's safety has otherwise been taken into account appropriately when planning operations;

2) if the location site of the nuclear facility is appropriate with respect to the safety of the planned operations and environmental protection has been taken into account appropriately when planning operations;

3) if physical protection has been taken into account appropriately when planning operations;

4) if a site has been reserved for constructing a nuclear facility in a town plan or building plan in accordance with the Building

Act (370/58), and the applicant has possession of the site required for the operation of the facility;

5) if the methods for arranging nuclear waste management, including the final disposal of nuclear wastes and the decommissioning of the facility, are sufficient and appropriate;

6) if the applicant's plans for arranging nuclear fuel management are sufficient and appropriate;

7) if the applicant's arrangements for the implementation of control by the Finnish Centre of Radiation and Nuclear Safety as referred to in subsection 1, point 3 of Section 63 in Finland and abroad, and for the implementation of control as referred to in subsection 1, point 4 of Section 63 are sufficient;

8) if the applicant has available the necessary expertise;

9) if the applicant has sufficient financial prerequisites to implement the project and carry on operations; further

10) if the applicant is otherwise considered to have the prerequisites to engage in operations safely and in accordance with the obligations under Finland's international treaties; and the planned nuclear facility otherwise fulfils the principles prescribed in Sections 5-7.

Section 20 - Operation of a nuclear facility

The licence to operate a nuclear facility may be issued as soon as a licence has been granted to construct it and if:

1) the operation of the nuclear facility has been arranged so that the protection of workers, the population's safety and environmental protection have been taken into account appropriately;

2) the methods for arranging for nuclear waste management, including the disposal of nuclear wastes and the decommissioning of the facility, are sufficient and appropriate;

3) the applicant has sufficient expertise available and, in particular, the competence of the operational staff and the operational organisation of the nuclear facility are appropriate;

4) the applicant is otherwise considered to have the prerequisites to engage in operations safely and in accordance with the obligations of Finland's international treaties; and

the nuclear facility and its operation otherwise fulfil the principles prescribed in Sections 5-7.

Operation of the nuclear facility shall not be started on the basis of a licence which has been granted:

1) until the Finnish Centre of Radiation and Nuclear Safety has ascertained that the nuclear facility meets the prescribed safety requirements, that the physical protection and emergency planning are sufficient, that the necessary control to prevent the proliferation of nuclear weapons has been arranged appropriately, and that the possessor of the nuclear facility has, as prescribed, arranged indemnification regarding liability in case of nuclear damage; and

2) until the Ministry of Trade and Industry has ascertained that provision for the cost of nuclear waste management has been arranged in accordance with the provisions of Chapter 7.

Section 21 - Other use of nuclear energy

A licence for the operations referred to in subsection 1, points 1-5 of Section 2 may be granted if, when required by the operations:

1) the use of nuclear energy has been arranged so that the protection of workers, the population's safety and environmental protection have been taken into account appropriately;

2) the applicant has possession of the site needed for the use of nuclear energy;

3) nuclear waste management has been arranged appropriately and provision for the cost of nuclear waste management has been made in accordance with the provisions of Chapter 7;

4) the applicant's arrangements for the implementation of control by the Finnish Centre of Radiation and Nuclear Safety as referred to in subsection 1, point 3 of Section 63 in Finland and abroad, and for the implementation of control as referred to in subsection 1, point 4 of Section 63 are sufficient;

5) the applicant has sufficient expertise available and the operational organisation and competence of the operational staff are sufficient; and

6) the applicant is considered to have the financial and other necessary prerequisites to engage in operations safely and in accordance with the obligations of Finland's international treaties; and if, furthermore,

the use of nuclear energy otherwise fulfils the principles prescribed in Sections 5-7.

The use of nuclear energy referred to in subsection 1 above shall not begin on the basis of a granted licence until the Finnish Centre of Radiation and Nuclear Safety has ascertained, when so required by the operations, that the use of nuclear energy is in accordance with the prescribed safety requirements, that the physical protection and emergency planning are sufficient, that the control necessary to prevent the proliferation of nuclear

weapons is appropriate and that indemnification regarding liability in case of nuclear damage in connection with the operations has been arranged as prescribed.

When considering the granting of a licence for operations referred to in subsection 1, point 2 of Section 2, subsection 1, points 1 and 3-5 of Section 21 shall be applied so that the prerequisites for a licence therein are met if the plans presented by the applicant are sufficient, in addition to which the site of the mining activity or the enrichment plant must be appropriate with respect to the safety of the operations intended. In addition to what is prescribed in subsection 2, the Finnish Centre of Radiation and Nuclear Safety shall ascertain that the operations referred to in subsection 1, point 2 of Section 2 meet the prerequisites prescribed in subsection 1, points 1 and 3-5 of Section 21.

Section 22 - A nuclear facility in a vehicle

When a nuclear facility is built for operation or is used in a vehicle or as its power source, the provisions of subsections 1-10 of Section 19 shall be applied only to the extent required by the operations.

When a nuclear facility referred to above is used only temporarily within Finland, the Ministry of Trade and Industry shall be the authority granting the licence; and this Act shall otherwise be applied as to operations referred to in subsections 1.2-1.5 of Section 2.

Section 23 - Processing of licence applications

A statement concerning the licence application shall be requested from the Finnish Centre of Radiation and Nuclear Safety and from the Ministry of the Environment except when, owing to the nature of the operations, this is obviously unnecessary. If the application pertains to export as referred to in Section 2, or to concluding an agreement as referred to in subsection 1, point 5 of Section 2, or to temporary operation of a nuclear facility within Finland as referred to in Section 22, a statement shall also be requested from the Ministry of Foreign Affairs, except when this is obviously unnecessary.

Before a decision is reached regarding a licence application for operations as referred to in subsection 1, point 2 of Section 2, the procedures prescribed in Section 13 shall be observed.

Section 24 - Validity of the licence

The licence, excluding the construction licence, shall be granted for a fixed term. When the length of the term is considered, particular attention shall be paid to ensuring safety and to the estimated duration of operations. The licence may include a provision that the licence will expire if operations are not started within a certain period of granting of the licence.

Section 25 - Licence conditions and modification thereof

The licence shall contain the necessary licence conditions as referred to in Chapter 2 of this Act, regarding the implementation of general principles.

The licence conditions may be modified in order to maintain the prerequisites regarding the general principles and the granting of a licence prescribed in this Act, especially when necessary to ensure the safe use of nuclear energy, to ensure nuclear waste management, for the implementation of physical protection measures or emergency planning, to ensure fulfilment of Finland's treaty obligations in the nuclear energy sector, or to prevent the proliferation of nuclear weapons.

When modifying licence conditions, to the extent applicable, the same procedure shall be followed as when the licence was granted.

Section 26 - Licence cancellation

The authority that has granted a licence must cancel it wholly or partly if implementation of the general principles for the use of nuclear energy as precribed in this Act is essentially endangered, for instance, as a consequence of:

1) the licence-holder violating the licence conditions or stipulations issued by an authority on the basis of this Act;

2) the licence-holder omitting to fulfil the reserve obligation referred to in Chapter 7 of the Act, or to observe the Nuclear Liability Act (484/72) in a manner referred to in Section 41 of that Act; or

3) the licence-holder dying or losing legal capacity or the corporation or foundation holding the licence being dissolved, otherwise discontinuing operations or going into bankruptcy.

The cancellation of a licence requires that a reasonable period of time has been allowed for the licence-holder to correct the deficiency, when possible by means of the licence-holder's actions.

When cancelling a licence, the applicable parts of the same procedure shall be followed as when the licence was granted.

Section 27 - Compensation

If the licence to construct or operate a nuclear facility is cancelled or the licence to operate a nuclear facility is denied, the holder of the cancelled licence or the applicant whose licence to operate the nuclear facility has been denied is entitled to a reasonable amount of compensation from the State of Finland for the direct expenses incurred in the construction of the facility.

Compensation shall not be paid, however, if the licence is cancelled because Sections 6 or 7 can no longer be observed in operating the facility, or because the licence-holder has acted contrary to this Act or the regulations under it, or for reasons referred to in subsection 1, points 2 and 3 of Section 26. Nor shall compensation be paid if the licence to operate the nuclear facility has been denied because the nuclear facility and its operation do not meet the principles prescribed in Sections 6 and 7 or the requirements prescribed in subsection 1, point 4 of Section 20.

The Ministry of Trade and Industry and whoever is entitled to compensation shall try to reach an agreement on the amount of compensation. A written version of the agreement shall be sent to the Council of State for ratification.

Should an agreement about compensation not be reached, a suit for compensation must be filed as prescribed in the Act on the venue of certain administrative issues (446/54), within two years following the decision on which the suit for compensation is based has come into force. If compensation is not applied for within the time specified, the right to compensation is lost.

CHAPTER 6 - NUCLEAR WASTE MANAGEMENT

Section 28 - Decision on implementation of the waste management obligation

The Ministry of Trade and Industry or the Finnish Centre of Radiation and Nuclear Safety, having granted a licence for operations generating nuclear wastes, shall decide, having consulted, if necessary, the Ministry of the Environment in the matter, the principles on the basis of which the waste management obligation, as referred to in subsection 3 of Section 9 is to be implemented. For this purpose the Ministry of Trade and Industry or the Finnish Centre of Radiation and Nuclear Safety may oblige the licence-holder with a waste management obligation to present a plan for carrying out nuclear waste management.

Section 29 - Mandatory waste management co-operation

The Ministry of Trade and Industry may order various licence-holders with waste management obligations to undertake waste management measures jointly, if by doing so safety can be increased or costs can be substantially reduced or if any other weighty reason so requires. At the same time, an order shall be given, if necessary, on the distribution of the costs incurred due to the measures to be carried out jointly.

Section 30 - Transfer of waste management obligation

When a nuclear facility, a mine or enrichment plant intended for the production of uranium or thorium, or nuclear waste is transferred, the Ministry of Trade and Industry may, on request, completely or partially

transfer the waste management obligation from the transferor to the transferee, if the transfer of the obligation does not endanger the carrying out of nuclear waste management.

Section 31 - Transfer of nuclear wastes to the State

If the Ministry of Trade and Industry considers that a licence-holder with a waste management obligation has substantially failed to observe the confirmed time-schedules for nuclear waste management of the nuclear wastes he has generated or has otherwise violated the authorities' orders for carrying out nuclear waste management, the Ministry shall bring the matter to the Council of State to decide whether the licence-holder's actions mentioned above, judged on the whole, give good reason to confirm that nuclear waste management completely or in part cannot be carried out by the licence-holder. If the Council of State finds that nuclear waste management completely or in part cannot be carried out by the licence-holder, the Council of State shall order that such nuclear wastes be transferred to the State, or to a domestic corporation under the authority of the State, for the implementation of the nuclear waste management measures still required.

The Council of State shall order that the nuclear wastes generated by the licence-holder with a waste management obligation be transferred to the State or to a corporation referred to in subsection 1, for the implementation of the nuclear waste management measures still required also in cases where the Council of State finds that, despite an order made under subsection 2 of Section 65, the licence-holder with a waste management obligation has not fulfilled the reserve obligation prescribed further on in this Act. Notwithstanding the provisions above in this subsection, the Council of State may not order the transfer of the nuclear wastes insofar as making such an order would place the State in a disadvantageous financial position with respect to implementation of the final outcome of measures for financial provision.

Section 32 - Expiry of waste management obligation

The Ministry of Trade and Industry or the Finnish Centre of Radiation and Nuclear Safety, having granted a licence for operations that generate nuclear wastes, shall order that the waste management obligation has expired when:

1) it has been transferred to another party in accordance with Section 30; or

2) the nuclear wastes have been transferred outside Finland's jurisdiction for good, in an approved manner; or

3) the disposal of nuclear wastes has been carried out in accordance with Section 33, and the licence-holder with a waste management obligation has paid a lump sum to the State for the control of the nuclear wastes.

Should the Council of State issue an order as referred to in Section 31, the State shall be responsible thereafter for the nuclear waste management measures not yet carried out for the wastes referred to in the order, and for the costs incurred in carrying out these measures by the licence-holder with a waste management obligation.

Section 33 - Disposal of nuclear wastes

Disposal shall be considered implemented when the Finnish Centre of Radiation and Nuclear Safety has confirmed the nuclear wastes to be permanently disposed of in an approved manner.

Section 34 - Responsibility for nuclear wastes after their disposal

When the licence-holder's waste management obligation has ceased on the basis of subsection 1, point 3 of Section 32, the rights of ownership to the nuclear wastes are transferred to the State, which shall be responsible thereafter for the nuclear wastes.

Should it become necessary after disposal, the State has the right, at the disposal site, to all measures required for the control of the nuclear wastes and for ensuring the safety of the repository.

CHAPTER 7 - FINANCIAL PROVISION FOR THE COST OF NUCLEAR WASTE MANAGEMENT

Section 35 - Financial provision obligation

The licence-holder with a waste management obligation, in the manner prescribed hereunder in this Chapter, shall make financial provision for the costs referred to in subsection 3 of Section 9.

In applying the provisions of this Chapter, nuclear wastes shall be considered to include even materials, objects and structures, as referred to in point 3b of Section 3, the use of which has not yet been discontinued.

The costs of nuclear waste management as referred to in this Chapter shall also be considered to include the charges incurred in nuclear waste management as referred to in Section 77.

Section 36 - Financial provision measures

For each calendar year, the licence-holder with a waste management obligation shall fulfil the financial provision obligation by payment of the charges referred to below into the State nuclear waste management fund, and shall furnish to the State the securities prescribed below as a precaution against insolvency.

Section 37 - Definitions

In this Chapter:

1) **assessed liability** shall refer to the assessed amount of costs incurred in the future for nuclear waste management in the case of the nuclear wastes generated by the licence-holder with waste management obligation;

2) **fund target** shall refer to the amount which, as the State Nuclear Waste Management Fund may determine, constitutes the reserve contribution of the licence-holder with a waste management obligation for each calendar year;

3) **fund holding** shall refer to the amount which the State nuclear waste management fund confirms to have been paid into the fund by a licence-holder with a waste management obligation;

4) **fund contribution** shall refer to the fee, to be confirmed annually, which the licence-holder with a waste management obligation must pay into the State Nuclear Waste Management Fund in order to raise the fund holding to the amount of the fund target;

5) **required share** shall refer to the amount which constitutes the actual share reached in each calendar year for payment of the costs incurred in the future management of nuclear wastes which the licence-holder with a waste management obligation has been ordered, in accordance with the provisions of Section 31, to transfer to the State;

6) **actual share** shall refer to the amount which the State Nuclear Waste Management Fund at each time confirms to be set aside in the fund to be used for the management of the nuclear wastes which a licence-holder with waste management responsibility has been ordered to transfer to the State; and

7) **profit or loss of the Fund** shall refer to the amount by which the total sum of the State Nuclear Waste Management Fund's income from interest and compensation received from funds held by the State exceeds or falls short of the costs and credit losses incurred in the State nuclear waste management fund's administration and capital management.

Section 38 - The State Nuclear Waste Management Fund

For purposes of implementing the financial provision, there shall be a State Nuclear Waste Management Fund, independent of the State budget but controlled and administered by the Ministry of Trade and Industry.

The State Nuclear Waste Management Fund shall have a Board of Directors, appointed by the Council of State for three calendar years at a time. The tasks and administration of the State Nuclear Waste Management Fund shall be prescribed more precisely by decree.

Section 39 - Estimation of the assessed liability

Estimation of the assessed liability shall be based on those basic nuclear waste management decisions, meeting the general principles of Chapter 2, which on the basis of knowledge available at the time of the assessment can be considered to enable the carrying out of nuclear waste management, if necessary, in due time.

The assessed liability is estimated on the basis of the price and cost levels prevailing at the time for which the assessed liability is confirmed. Sources of information about prices and costs which can be considered to be reliable shall be used in making the assessment. The uncertainty of available sources of prices and costs shall be taken into account, in a reasonable manner, when raising the assessed liability.

Estimation of the assessed liability shall be based on decision, price information and price estimates meeting the demands placed on licence-holders with a waste management obligation as presented in subsections 1 and 2.

Section 40 - Amount of the Fund target

The Fund target for each calendar year shall be equal to the assessed liability at the end of the previous calendar year. To distribute the costs of nuclear waste management more evenly among the operating years of a nuclear facility, however, the Fund target shall be less than the assessed liability when the prerequisites prescribed in subsection 2 have been met.

When the nature of operations of a nuclear facility is such that a considerable proportion of its nuclear waste management costs is made up of costs that do not depend on the amount of nuclear wastes, the Fund target of the nuclear facility in its various years of operation shall be the specified share of the assessed liability that the nuclear facility falling to the licence-holder with a waste management obligation. The ratio of the Fund target to this assessed liability shall be increased gradually, so that the fund target shall reach the assessed liability in sufficient time before it is estimated that the nuclear facility will cease operations.

Section 41 - Financial provision payable by the licence-holder with a waste management obligation

The Fund holding shall be considered to include:

1) the most recently confirmed Fund holding of the licence-holder with waste management obligation;

2) the nuclear waste management fee received by the Fund from the licence-holder with a waste management obligation after the last confirmed fund holding, and any supplementary waste management fee referred to in subsection 3 of Section 44; and

3) any amount notified by the Ministry of Trade and Industry on the basis of subsection 3 of Section 43 after the last confirmed Fund holding.

The Fund holding shall be obtained by subtracting the following from the amount referred to in subsection 1:

1) any surplus which the licence-holder with a waste management obligation has received from the Fund since confirmation of the last Fund holding; and

2) the amount of the last confirmed Fund holding paid by the licence-holder with a waste management obligation that has been transferred to the actual share, and after the last confirmed Fund holding, the amount notified by the Ministry of Trade and Industry on the basis of subsection 3 of Section 43.

The Fund holding on the last day of December of each year shall be obtained by adding the share of the Fund's profit to which the licence-holder with a waste management obligation is entitled, to the Fund holding referred to in subsections 1 and 2, or by subtracting from the said Fund holding the said share of the Fund's loss.

Section 42 - Fund contribution, and profit

The licence-holder with a waste management obligation shall pay the Fund contribution to the State Nuclear Waste Management Fund so that the Fund holding on the last day of March is equal to the Fund target for the current calendar year.

Should the Fund target for the calendar year be lower than the Fund holding on the last day of December the previous year the said profit shall be refunded, without delay, to the licence-holder.

Section 43 - Confirming the assessed liability and the Fund target

The Council of State shall issue general provisions on how the expenses referred to in Section 35 are to be taken into consideration in the assessment of the assessed liability, as well as on the procedure to be followed in calculating the fund target in cases referred to in subsection 2 of Section 40, as well as on other principles of the fund procedure.

The Ministry of Trade and Industry shall, at the beginning of the calendar year, confirm the assessed liability of each licence-holder with a waste management obligation as at the end of the previous calendar year and the Fund target for the current calendar year.

The Ministry of Trade and Industry shall confirm the changes arising from the transfer of the waste management obligation as referred to in Section 30 and affecting the assessed liability and the Fund targets of the concerned licence-holder with a waste management obligation, observing the provisions of Section 40 to the extent applicable, as well as the amount to be

transferred from the Fund holding of the licence-holder to the Fund holding of the transferee as referred to in Section 30.

Section 44 - Arrangements concerning security

The licence-holder with a waste management obligation shall supply the State securities fulfilling the conditions prescribed in Section 45, prior to the commencement of the waste generating operation and otherwise always by the end of June, so that the total securities held at that time by the State are equal to the difference between the separately determined assessed liability at the end of the current calendar year and the Fund target of the current calendar year. The decision on the assessed liability to be determined in this way shall be taken by the Ministry of Trade and Industry.

Should there be a major change in the principles on which determination of the assessed liability is based, the Ministry of Trade and Industry may reassess the assessed liability. Should the reassessed assessed liability be higher than the previous assessed liability, the required supplementary securities must be provided to the State within three months from the confirmation of the assessed liability.

In case of unforeseen nuclear waste management expenses the Council of State is to prescribe an increase in the amount of the securities to be provided to the State as prescribed in this Section. The amount of the securities may be increased by a maximum amount equalling 10 per cent of the assessed liability of the licence-holder with a waste management obligation assessed in accordance with this Section.

Should the licence-holder with a waste management obligation fail to provide to the State securities for the amount prescribed in this Section, the licence-holder shall pay the State nuclear waste management fund an additional fund contribution corresponding to the outstanding amount by the deadline specified in this Section.

Section 45 - Securities

As security the Ministry of Trade and Industry may accept only:

1) credit insurance provided by an insurance company as referred to in Section 1 of the Insurance Companies Act (1062/79);

2) direct liability guarantee provided by a Finnish commercial bank, savings bank or co-operative bank or the Post Office Bank; or

3) such real estate mortgage or direct liability guarantee by a Finnish association as has been accepted by the Council of State as corresponding in reliability to the security referred to in point 1 or 2.

A security with a validity period of less than five years cannot be accepted.

Section 46 - Temporary decrease in the Fund target

For a special reason the Council of State may allow the Fund target to be assessed lower than required by the provision in Section 40 for a period of a maximum of five years at a time.

Section 47 - Required share and the Government claim

Should the Council of State issue an order referred to in Section 31, concerning the transfer of nuclear waste to the State, the Council of State shall confirm the assessed liability corresponding to the nuclear waste management expenses of the nuclear waste ordered to be transferred, as well as the assessed liability corresponding to the nuclear waste management expenses of nuclear waste to which the order does not apply generated by the licence-holder with a waste management obligation.

In the same connection, the Council of State shall also confirm the required share resulting from the nuclear waste to be transferred, which is obtained by increasing the assessed liability corresponding to such nuclear waste by the amount prescribed in subsection 3 of Section 44.

After the Council of State has confirmed the required share, a claim by the State is lodged against the licence-holder with a waste management obligation, the amount of which corresponds to the required share and which fall payable upon demand.

Section 48 - Meeting the Government claim; actual share

When the Government claim has been fixed, it shall primarily be met by separating from the Fund holding of the licence-holder with a waste management obligation such proportion of the Fund holding as corresponds to the proportion of the Fund holding corresponding to the transferred nuclear wastes, of the total amount of the Fund holdings as referred to in subsection 1 of Section 47, to form the actual share in the State Nuclear Waste Management Fund. The licence-holder with a waste management obligation shall pay the rest of the Government claim to the Fund, to be added to the Fund holding within three months of the establishment of the Government claim.

Insofar as the licence-holder with a waste management obligation fails to pay the outstanding debt as referred to in subsection 1 within the time specified, a corresponding amount of the securities provided to the State pursuant to Section 44 must be converted into money, which shall be added to the actual share. Should the insurance company or bank, referred to in subsection 1, point 1 or 2 of Section 45, which granted such a security so require, the Fund shall lend the money obtained from the securities for a fixed period, at an interest rate referred to in subsection 3 of Section 52, against a promissory note given by it to the fund, and on such other condition as the Fund may stipulate, should the Ministry of Trade and Industry consider such an undertaking to ensure that the funds can be taken into use.

Section 49 - Supplementing the actual share

After the required share has been confirmed for the first time in the way prescribed in Section 47, the Ministry of Trade and Industry shall reconfirm it annually, observing the provisions on assessed liability and required share in subsection 2 of Section 43 and subsection 2 of Section 47.

The licence-holder with a waste management obligation shall pay the fees annually to the State Nuclear Waste Management Fund, to be added to the relevant actual share in such a way that the amount of the actual share shall correspond to the amount of the required share within three months from the confirmation of the same.

Section 50 - Use of the actual share

Should the actual share in any calendar year exceed the required share, separately assessed by the Ministry of Trade and Industry on the last day of the year, the balance between the actual share and the required share shall be available for compensating the State for any expenses arising from nuclear waste management measures regarding wastes transferred to the State under Section 31, including any annual interest calculated from the date of the costs, the rate of which is prescribed in subsection 3 of Section 52.

Should the balance referred to in the preceding first paragraph not be sufficient to pay the said compensation and interest, the licence-holder with waste management obligation is to pay the outstanding amount to the State within one month of the date of demand.

Should the actual share, after the procedure referred to in the preceding first paragraph, exceed the separately assessed required share referred to in the preceding first paragraph by more than 20 per cent, the amount corresponding to this excess amount shall be refunded to the licence-holder.

Section 51 - Profit and loss of the State Nuclear Waste Management Fund

The profit by the State Nuclear Management Fund for a calendar year shall be added to credit and its loss be subtracted from, the Fund holdings and actual shares as on the last day of December in the same proportion as the corresponding Fund holding and actual shares have constituted the capital of the Fund during the calendar year.

Section 52 - The capital of the State Nuclear Waste Management Fund

The licence-holder with a waste management obligation is entitled to receive a loan against full securities for a fixed period from the State Nuclear Waste Management Fund. The amount borrowed from the Fund must not, however, exceed 75 per cent of the Fund holding last confirmed for the said licence-holder with a waste management obligation. The shareholders of the licence-holder shall have the right to use the above mentioned right of the licence-holder to the extent not used by the licence-holder himself. The

amount to be lent from the Fund to the shareholders at any given time must be lent to the shareholders requesting it in proportion to their shareholding, as prescribed by the Fund in greater detail if necessary.

Any amount of Fund capital which has not been lent pursuant to subsection 1 or pursuant to subsection 2 of Section 48 shall be available to the State and can be transferred in the State budget from the Fund, to the State finances, for a fixed period. If capital has been transferred to the State finances, an appropriation must be included annually in the State budget for returning the capital to the Fund during the year in question, and for paying the Fund some compensation, the amount of which corresponds to the interest rate prescribed in subsection 3, for the period that the capital was allocated in the State finances.

The interest charged for loans from the Fund, granted under subsection 1, shall be a minimum of the base rate of the Bank of Finland increased by two percentage points. Should the increase in consumer prices from December to December exceed the average level of the Bank of Finland's base rate during the same year, the interest charged shall be increased by the amount of the exceeding amount rounded up to the nearest full one quarter of a per cent.

In case the Fund capital remains unused in the manner prescribed in subsections 1 and 2, the Fund shall invest such capital against full securities in some other way yielding the best possible return.

The general terms and conditions of the loans shall be decided by the Council of State, upon the proposal of the Ministry of Trade and Industry.

Section 53 - *Limitations of returning securities and surplus*

Should it be discovered, at the time when the assessed liability amount of the end of the previous calendar year is confirmed, that more securities have been supplied by the licence-holder with a waste management obligation to the State than required by the said assessed liability amount, the excess amount shall be refunded to the licence-holder by the end of June of the current calendar year, provided that the licence-holder has fulfilled his obligations concerning the payments referred to in this Chapter.

Any surplus that has been confirmed for refund to the licence-holder with a waste management obligation shall not be paid before the licence-holder has fulfilled his obligations concerning the assignment of securities.

CHAPTER 8 - NUCLEAR ENERGY AUTHORITIES

Section 54 - The highest management and supervision of nuclear energy matters

The Ministry of Trade and Industry is responsible for the highest management and supervision of nuclear matters.

Section 55 - The supervisory authority

The Finnish Centre of Radiation and Nuclear Safety is responsible for the supervision of the safe use of nuclear power. In addition the Finnish Centre of Radiation and Nuclear Safety shall be responsible for attending to the supervision of physical protection and emergency planning, and for the necessary control of the use of nuclear energy to prevent the proliferation of nuclear weapons.

In order to carry out the tasks mentioned in subsection 1 above, the Finnish Centre of Radiation and Nuclear Safety shall in particular:

1) participate in the processing of licence applications pursuant to this Act;

2) supervise the observance of licence conditions as well as set detailed requirements concerning the operations referred to in the licence;

3) issue detailed regulations and put forward the proposal for the general regulations referred to in subsection 2 of Section 81;

4) supervise the observance of the regulations referred to in point 3;

5) set qualification requirements for persons involved in the use of nuclear energy and control that the requirements are met;

6) provide expertise for other authorities;

7) carry out research and development work necessary for supervision and participate in international co-operation in the field; and

8) put forward proposals and issue statements occasioned by supervision.

The Finnish Centre of Radiation and Nuclear Safety shall also be in charge of passing judgments on such licence applications pursuant to this Act as have been prescribed to be determined by the Centre, and of supervising that liability in case of a nuclear damage is arranged for in accordance with provisions in its respect.

The Finnish Centre of Radiation and Nuclear Safety may, upon request by anyone planning to use nuclear energy, check the plan drawn up by them and issue preliminary instructions on what should be taken into account with respect to safety, physical protection and emergency planning.

Section 56 - Consultative committees

A permanent consultative committee appointed by the Council of State shall work to prepare matters concerning the use of nuclear energy in conjunction with the Ministry of Trade and Industry.

A permanent consultative committee appointed by the Council of State shall work to prepare matters concerning the safe use of nuclear energy in conjunction with the Finnish Centre of Radiation and Nuclear Safety.

A decree will be passed containing more detailed provisions on the consultative committees referred to in this Section.

CHAPTER 9 - OTHER LEGISLATION AND CO-OPERATION BETWEEN AUTHORITIES

Section 57 - Other legislation

A licence granted under this Act shall not release the licence-holder from observing the requirements and provisions laid down for the operation in other legislation.

Section 58 - Construction and planning of land use

What is prescribed elsewhere in law shall apply to the planning of land use of an area intended for the site of a nuclear facility. Before a town plan or building plan is drawn up for the area intended for the site of a nuclear facility, and prior to the approval of such a plan where a site is reserved for the construction of a nuclear facility, a statement must be obtained from the Finnish Centre of Radiation and Nuclear Safety.

What is prescribed elsewhere in law shall apply to the construction of a nuclear facility. When, however, special requirements concerning the safe use of nuclear energy, physical protection or emergency planning or control to prevent the proliferation of nuclear weapons are to be taken into account in the construction, provisions caused by such circumstance shall be issued, and supervision of the observance of such provisions shall be the responsibility of the Finnish Centre of Radiation and Nuclear Safety. A decree prescribing the division of executive power between the authorities in cases referred to in this subsection shall be passed if necessary.

Section 59 - Protection of workers

Those licensed to use nuclear energy shall assure the employees' safety at work, observing the provisions of the Safety at Work Act (299/58), and those of the Radiation Protection Act (174/57) and the Mining Act (503/65) to the extent applicable as well as this Act and any provisions issued hereunder.

When ensuring safety at work requires consideration of the special requirements concerning the safe use of nuclear energy, the Finnish Centre of Radiation and Nuclear Safety shall issue provisions to this effect, and monitor their observance. A decree prescribing the division of executive power between the authorities in cases referred to in this subsection shall be issued if necessary.

Section 60 - Pressure vessels

This Act and the provisions issued hereunder, and the Act on Pressure Vessels (98/73) to the extent applicable, and the provisions issued thereunder shall be applied to the pressure vessels at nuclear facilities as prescribed in greater detail by a decree.

Section 61 - Radiation protection, transport of nuclear material and liability for nuclear damage

In addition to the provisions of this Act, separate laws and regulations have been enacted on radiation protection and transport of nuclear material and nuclear waste.

A special law and regulations have been enacted on liability for nuclear damage.

Section 62 - Co-operation among authorities

When a matter to be settled by the authorities may affect the safe use of nuclear energy, a statement must be obtained from the Finnish Centre of Radiation and Nuclear Safety prior to its settlement.

CHAPTER 10 - SUPERVISION AND COERCIVE MEASURES

Section 63 - Supervisory rights

The Finnish Centre of Radiation and Nuclear Safety shall be entitled, in order to carry out the supervision required by this Act, and by the provisions issued hereunder and by Finland's international treaties in the field of nuclear energy, to:

1) inspect and control operations referred to in subsection 1, points 1-4 of Section 2, and for this purpose have access to any place where such an operation is being carried out, as well as to carry out measurements required for supervision, take and receive samples and install equipment necessary for such supervision;

2) oblige the licence applicant to arrange entry for the Finnish Centre of Radiation and Nuclear Safety to carry out inspections and measurements and to take samples in the premises on which, according to the application, the operation referred to in subsection 1, points 1-4 of Section 2 will be carried out;

3) require that nuclear fuel or the buildings and equipment intended as parts of the nuclear facility be manufactured in a manner approved of by the Finnish Centre of Radiation and Nuclear Safety, and oblige the licence-holder or licence applicant to arrange for the Centre

sufficient opportunity to control manufacture of the fuel or such buildings or equipment;

4) receive necessary information and be provided with the plans and contracts and their grounds concerning the manufacture, quality control or processing of nuclear materials, nuclear waste, the nuclear facility and its buildings and equipment, as well as any material, device and equipment referred to in subsection 3 of Section 2;

5) oblige any person carrying out the operation referred to in subsection 1 of section 2 to submit reports in the prescribed form, as well as other necessary information and notifications, and to keep materials and operations accounting in the prescribed forms and to inspect these accountings; as well as

6) issue prohibitions on measures concerning real estate when this is necessary in order to secure safety, when that real estate includes premises referred to in point 5b of Section 3.

What is prescribed above in points 1 and 2 and 5 of subsection 1 shall also apply, to such extent as required by the control referred to in Finland's international treaties in the field of nuclear energy, to such persons approved by the Finnish Government, who in the presence of a representative of the Finnish Centre of Radiation and Nuclear Safety carry out the supervision referred to in such treaties.

Section 64 - Required changes in the construction and use of a nuclear facility

Should it be discovered in an inspection carried out by the Finnish Centre of Radiation and Nuclear Safety or otherwise that, in order to secure the safe use of nuclear energy, to maintain appropriate physical protection or emergency planning or to fulfil obligations under Finland's international treaties in the field of nuclear energy, it is necessary to make changes in the construction of a nuclear facility or in the operation relating to its construction or use, the Finnish Centre of Radiation and Nuclear Safety shall, upon consulting the licence-holder, oblige him to carry out the necessary changes within the time specified.

Prior to issuing a regulation referred to in subsection 1, necessary for securing the safe use of nuclear energy, the Finnish Centre of Radiation and Nuclear Safety shall request a statement from the permanent consultative committee mentioned in subsection 2 of Section 56, unless the change involved in the regulation is to be considered of minor financial significance, or such that its implementation must not be delayed.

Section 65 - Removing defects and faults

If the provisions, regulations, or licence conditions concerning safety, physical protection or emergency planning prescribed in this Act or hereunder have not been observed in the use of nuclear energy, the Finnish Centre of Radiation and Nuclear Safety shall issue, upon consulting the

licence-holder, instructions to remove the defects or faults, and at the same time oblige the licence-holder to take the required measures within the time specified.

What is prescribed in the above shall also be applied when the defect or fault follows from a failure to comply with the provisions of this Act, regulations made hereunder or the licence conditions. Provisions concerning the competent authority in cases referred to here shall be issued in a decree.

Section 66 - Use of coercive measures in some cases

An authority may reinforce its order referred to in Sections 64 or 65 by a conditionally imposed fine, or a threat to interrupt or limit the operation or to have the neglected obligation fulfilled at the expense of the neglecting party. The expenses of such a measure shall be paid in advance from the State funds, and can be collected from the neglecting party as prescribed in subsection 2.

The Fund contribution referred to in subsection 1 of Section 42, in subsection 4 of Section 44 and subsection 2 of Section 49, and the interest and compensation referred to in subsection 2 of Section 50, may be collected from the licence-holder without a court judgment or decision in the order prescribed in the Act on collecting taxes and payments through execution (367/61)

Section 67 - Interruptions or limitations of operation

Should a defect or fault referred to in Section 64 or 65 cause immediate danger, or should there otherwise be a justified cause to suspect the operation to present an immediate danger, the Finnish Centre of Radiation and Nuclear Safety may, if possible upon consulting the licence-holder, interrupt the operation or limit it until the cause which has led to the issuing of such an order has ceased to exist. The Finnish Centre of Radiation and Nuclear Safety shall have the same right, if supervision hereunder cannot be implemented otherwise, or if the licence-holder has failed to fulfil his obligations under the Nuclear Liability Act.

Section 68 - Executive assistance and confiscation

A police authority shall provide executive assistance when needed in matters relating to supervision of the observance of this Act and the provisions issued hereunder.

Upon request by the Ministry of Trade and Industry or the Finnish Centre of Radiation and Nuclear Safety, the competent police authority shall be entitled to conduct a search of the premises or a physical examination to identify:

1) a nuclear facility built or operated in violation of this Act in a vehicle referred to in Section 22;

2) ore or ore concentrates containing uranium or thorium produced or imported in violation of this Act, or similar attempts to export such material;

3) nuclear material or waste fabricated, possessed, produced, transferred, processed, used, stored or imported in violation of this Act, or similar attempts to export such nuclear material or waste;

4) a material, device, equipment or nuclear information possessed, transferred or imported in violation of this Act, or similar attempts to export them,

and the authority to order such nuclear facility or the vehicle containing it, as well as the ore, ore concentrates, nuclear material, waste, substance, device, equipment or information referred to above to be confiscated. Such confiscation shall remain in force until a legally valid decision has been passed on the case in regard to forfeiture of the confiscated material or object taken to court under Section 73, or the court or the competent police authority having requested executive assistance, issues an order to the contrary.

Otherwise, the Act on confiscation and search in criminal matters (260/59) shall be applied to search of the premises, physical examination and confiscation.

CHAPTER 11 - SANCTIONS

Section 69 - Nuclear energy offences

Any such person who intentionally or inadvertently uses nuclear material or waste in his possession, or acts, when using nuclear energy, in some other way so that his action is apt to cause danger to the life, health or property of another person or the environment, shall be sentenced for a **nuclear energy offence** to imprisonment, for a maximum of six years.

Any person guilty of a premeditated offence, referred to in subsection 1, in such a way that his action may present a serious hazard to the life, health or property of another person or to the environment, shall be sentenced **for nuclear energy felony** to imprisonment for a fixed period, for a minimum of two years.

If an offence, referred to in subsection 1, is such as is apt to cause only minor hazard or is insignificant when taking other considerations relating to the offence into account, the offender shall be sentenced for a **minor nuclear energy offence** to a fine, or to imprisonment for a maximum of two years.

An attempt at a premeditated offence referred to in this Act is subject to punishment.

Section 70 - Offence involving a nuclear explosive device

Any person intentionally importing, fabricating, keeping in his possession or detonating a nuclear explosive, shall be sentenced for a nuclear explosive offence to imprisonment for a fixed period, for a minimum of four years.

An attempt at such an offence is subject to punishment.

Any person who, in order to commit an offence referred to in subsection 1, procures nuclear material or procures or manufactures explosive material, any component or device needed to explode a nuclear explosive or a formula or drawing needed in the fabrication of a nuclear explosive device, shall be sentenced for the preparation of a nuclear explosive device to imprisonment, for a maximum of six years.

Any such person who inadvertently commits an offence referred to in subsection 1 shall be sentenced for an inadvertent nuclear explosive offence to imprisonment for a maximum of six years.

Section 71 - Threatening with a nuclear explosive device or a nuclear energy offence

Any person threatening to explode a nuclear device, or threatening to use nuclear material or nuclear waste in his possession, or acting when using nuclear energy in some other way so that there is justified cause to consider the life, health or property of another person or the environment to be endangered, shall be sentenced to imprisonment, for a maximum of six years, for threatening with a nuclear explosive device or a nuclear energy offence.

Section 72 - Unauthorised use of nuclear energy and violation of the provisions of the Nuclear Energy Act

Any person using nuclear energy without such licence as prescribed in this Act, shall be sentenced for unauthorised use of nuclear energy to a fine or to imprisonment, for a maximum of two years.

Any person who intentionally or inadvertently:

1) fails to observe the provisions of Section 9, subsection 2 of Section 20, subsection 2 of Section 21, Section 36 or what has been prescribed under subsection 1 of Section 76;

2) violates or fails to observe any of the licence conditions referred to in Section 25 or what has been prescribed under this Act by an authority in order to secure safety, in physical protection or emergency planning or in order to attend to other arrangements necessary for reducing nuclear damage;

3) for some reason other than for a compelling reason to secure safety, prevents or interferes with the operation of equipment installed for the control referred to in Section 63;

4) violates an obligation provided under subsection 1, point 5 of Section 63; or

5) without being a civil servant, violates the obligation to observe secrecy under this Act,

shall be sentenced to a fine or to imprisonment for violation of the provisions of the Nuclear Energy Act, for a maximum of two years.

Section 73 - Forfeiture

The nuclear explosive, nuclear material, nuclear waste or an explosive, component, device, formula or drawing referred to in subsection 3 of Section 70, which have been used to commit an offence referred to in Sections 69-71, shall be ordered forfeit to the State. However, the sentence of forfeiture will be waived in case of an offence referred to in subsection 3 of Section 69.

In case of an offence referred to in subsection 1 of Section 72, contrary to this Act or provisions hereunder, any of the following can be declared wholly or partly forfeit to the State:

1) a nuclear facility built or used in violation of this Act;

2) a mine or an enrichment plant which has started its operations or an ore or ore concentrate containing uranium or thorium which has been produced in such a mine or plant in violation of this Act;

3) a nuclear material or nuclear waste fabricated, possessed, produced, transferred, processed, used, stored or transported or imported or exported in violation of this Act, as well as an ore or ore concentrate containing uranium or thorium which has been thus imported or exported; and

4) a substance, device, equipment or nuclear information possessed, transferred, imported or exported in violation of this Act, or its value.

Any financial benefit from an offence referred to above in this Section shall be declared forfeit to the State, as prescribed in the Penal Code.

Section 74 - Prosecution

The public prosecutor shall not be allowed to bring action for an offence referred to in this Act before having acquired statements on the matter from the Ministry of Trade and Industry and the Finnish Centre of Radiation and Nuclear Safety.

CHAPTER 12 - MISCELLANEOUS PROVISIONS

Section 75 - Appeal and enforcement of decision

Decisions in principle made by the Council of State under Section 11 and decisions under Section 46 cannot be appealed.

A decision by the Council of State, the Ministry of Trade and Industry or the Finnish Centre of Radiation and Nuclear Safety other than the one referred to in subsection 1 shall be appealed in the order laid down in the Act on Appeal in Administrative Matters (154/50).

A decision under subsections 2 or 3 of Section 43, under Section 44 or Section 47, under subsection 1 of Section 49, under subsection 1 of Section 52, under subsection 1 of point 5 of Section 63 or under Section 66 or Section 68, and a decision under Section 65, if it contains a provision to that effect, can be enforced in spite of an appeal.

Section 76 - Notification obligation of a party exempted from obtaining a licence, and the use of nuclear energy without licence

A decree may be passed to the effect that a written notification must be submitted to the Ministry of Trade and Industry or the Finnish Centre of Radiation and Nuclear Safety on an operation not requiring a licence under subsection 2 of Section 2.

What has been prescribed in this Act on the obligations of the licence-holder and the control and coercive measures of the authorities in relation to the licence-holder shall also be applied to any person acting against the prohibition prescribed in subsection 1 of Section 8.

Section 77 - Fees

A fee, in accordance with the provisions of the decree, can be charged for a decision in principle issued by the Council of State, a decision on a licence application issued by an authority or a similar decision, a decision by an authority taken in order to implement the obligation for financial provision, and any measure or document relating to the supervision of the use of nuclear energy referred to in this Act, as well as for measures required for the preparation of these decisions, measures and documents. The rates of the fees are determined according to the provisions of the Act on the rates of the fees payable to the State (980/73). What is prescribed in the Stamp Duty Act (662/43) shall apply to the stamp duty.

Section 78 - Obligation to observe secrecy

Those employed by an authority must not disclose to an outsider or use for their private benefit what they have learnt about secrets relating to business or profession when performing tasks for the authority as prescribed in this Act. What is prescribed above in this Act shall also be applied to

any such person who, on the basis of an authority's assignment, performs investigations, surveys or other tasks for the authority necessary for executing tasks prescribed in this Act.

Those who, in connection with the activities referred to in this Act, obtain information on plans concerning physical protection referred to in Section 7 or on material compiled in their preparation, or documents drawn up on the basis of the plans must not disclose the information obtained in this manner to an outsider, if the disclosure of this information to an outsider may endanger the purpose of the physical protection.

Those who, in connection with activities referred to in this Act, have come to know details of the data material referred to in subsection 1, point 4 of Section 2 must not disclose it to an outsider. The obligation to observe secrecy prescribed in this Section shall not terminate even if the employment relationship or assignment terminates.

Otherwise what has been separately provided on the publicity of documents shall be applied.

Section 79 - Ascertaining the competence of the staff

An operation for which a licence referred to in Section 20 has been granted cannot be carried on if a responsible manager approved by the Finnish Centre of Radiation and Nuclear Safety has not been appointed for the operation. What has been prescribed here shall also apply to operations under a licence according to Sections 18, 19 and 21 and 22 in such cases as provided for by decree.

The Finnish Centre of Radiation and Nuclear Safety may set qualification requirements concerning persons carrying out tasks relating to operations referred to in this Act in a capacity other than that mentioned in subsection 1, and may examine the fulfilment of these qualification requirements.

Section 80 - Substance, object or information possessed by an authority

Should any substance, object or information, referred to in subsection 1, points 3 or 4 of Section 2, be discovered and should no owner or possessor be identified, it shall belong to the State.

Any substance, object or information material, referred to in subsection 1 above, as well as any nuclear facility or substance, object or information which, under the provisions of this Act is taken by or comes into the custody of the authorities, shall be retained as required in Section 6. Furthermore, any confiscated nuclear facility or vehicle containing such a facility, as well as any other confiscated object, substance or information must be retained at the expense of the owner or the possessor, in a secure place under the seal of the authorities.

Section 81 - Authorisation to issue regulations

The Council of State may issue general regulations concerning the following aspects of the use of nuclear energy:

1) safety;

2) physical protection and emergency planning; or

3) rescue service arrangements and how the holder of a licence, as referred to in this Act must participate in them.

The Finnish Centre of Radiation and Nuclear Safety shall draw up proposals for the regulations referred to in points 1 and 2, and before submitting the proposals to the Ministry of Trade and Industry shall consult on their details the authorities provided for by decree.

Before the general arrangements referred to in subsection 1, point 3 are submitted to the Council of State to decide, the Ministry of the Interior must consult the authorities as provided for by decree.

Section 82 - Power to make decrees

More detailed provisions on the implementation of this Act shall be given by decree.

Section 83 - Entry into force of the Act

This Act, hereafter called the new Act, shall enter into force on the first day of the month of March, 1988, and shall abrogate the Atomic Energy Act (356/57) issued on 25th October 1957, hereafter called the old Act, and its subsequent amendments and the provisions and regulations issued under it, as well as the Act on the prohibition of certain nuclear explosions (587/63), issued on 20th December 1963.

Measures required for the implementation of this Act can be taken before the entry into force of the new Act.

Section 84 - Transitional provisions

On the entry into force of the new Act, the new Act shall be applied to pending licence applications.

A construction licence granted under Section 3 of the old Act shall be considered to have been granted under the new Act. Other licences granted under the old Act shall be considered to have been granted under the new Act. However, they shall expire, at the latest, five years after the entry into force of the new Act.

If, when granting a licence under the old Act, the licence is considered to include operations requiring, contrary to the provisions of the

old Act, a building or operating licence under the new Act, and if such an operation referred to in the licence is started, at the latest, within five years after the entry into force of the new Act, the building or operation licence in accordance with the new Act is considered to be included in the licence granted under the old Act.

Any person engaging in an operation referred to in subsection 1 of Section 2 of the new Act when the new Act enters into force must apply for a licence as required in the new Act within six months of the entry into force of the Act, unless otherwise is implied by the provisions of subsections 2 and 3.

When the new Act enters into force, the conditions and provisions in licences granted under the old Act shall expire to the extent they are contradictory to the new Act or provisions issued under it. Notwithstanding the above, the readiness measures implemented according to the licence conditions and provisions issued under Section 5 of the old Act shall, however, remain in force for a maximum of two years after the entry into force of the new Act, and according to the provisions included in the decree on the implementation of the provisions in Chapter 7 of the new Act.

Should a decision issued under the old Act allow the storage of spent nuclear fuel or nuclear waste included in nuclear fuel at the site of the nuclear facility or the processing, or storage or disposal of it in a way which is intended to be final, a licence for building such a nuclear facility referred to in section 11 of the new Act, may be granted notwithstanding the provision in point 1 of Section 18 of the new Act.

Norway

ACT NO. 28 OF 12TH MAY 1972 CONCERNING NUCLEAR ENERGY ACTIVITIES

As Amended by Act No. 26 of 25th May 1973, Act No. 37 of 8th June 1973 and Act No. 103 of 20th December 1985*

CHAPTER I - DEFINITIONS, ETC.

Section 1 - Definitions

For the purposes of this Act:

(a) **nuclear fuel** means:

fissionable material in the form of uranium or plutonium metal, alloy or chemical compound, and such other fissionable material as the Ministry may determine;

(b) **radioactive products** means:

other radioactive material (including wastes) which is made, or has become radioactive by radiation incidental to the production or utilisation of nuclear fuel;

(c) **nuclear substance** means:

nuclear fuel, other than natural uranium and depleted uranium, as well as radioactive products, except radioisotopes used for industrial, commercial, agricultural, medical, scientific or educational purposes or which are intended for, and are directly usable for such a purpose;

(d) **nuclear reactor** means:

structure containing nuclear fuel in such an arrangement that a self-sustaining chain process of nuclear fission can occur therein without the addition of neutrons from another source;

(e) **nuclear installations** means:

nuclear reactor installation;
factory for the production or processing of nuclear substances;
factory for the separation of isotopes of nuclear fuel;
factory for the reprocessing of irradiated nuclear fuel;

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* Unofficial translation by the Norwegian authorities.

facilities for the storage of nuclear substances other than facilities intended exclusively for use as temporary storage incidental to the carriage of such substances, and such other facilities, in which there are nuclear fuel or radioactive products, as the Ministry may determine;

(f) **Installation State** means:

the State within which a specific nuclear installation is situated or, if the installation is not situated within the territory of any State, that State which operates or has authorised the installation;

(g) **operator of nuclear installation** means:

anyone having obtained a concession for operating the installation or - in the absence of a concession - anyone in control of the installation or whom the Ministry has so designated, or, as far as installations abroad are concerned, anyone recognised as operator in accordance with the legislation of the Installation State;

(h) **nuclear damage** means:

damage resulting from radioactive properties, or a combination of radioactive properties with toxic, explosive or other hazardous properties of nuclear fuel or radioactive products, as well as damage resulting from ionizing radiation emitted by any other source within a nuclear installation;

(i) **nuclear incident** means:

an occurrence which causes nuclear damage or a series of occurrences having the same origin and causing nuclear damage;

(j) **the Paris Convention** means:

the Convention on Third Party Liability in the Field of Nuclear Energy signed in Paris on 29th July 1960 and amended by the Protocol of 28th January 1964 or the said Convention as further amended by the Protocol of 16th November 1982;

(k) **Supplementary Convention** means:

the Convention Supplementary to the Paris Convention signed in Brussels on 31st January 1963 and amended by the Protocol of 28th January 1964 or the said Convention as further amended by the Protocol of 16th November 1982;

(l) **Vienna Convention** means:

the Convention on Civil Liability for Nuclear Damage signed in Vienna on 21st May 1963;

(m) **Contracting State** means:

State which has acceded to both the Paris Convention and the Vienna Convention or to one of these Conventions to which Norway also has acceded, and which have entered into force both for Norway and for the State concerned;

(n) **SDR means:**

the special drawing right laid down by the International Monetary Fund. SDR shall be converted into Norwegian kroner according to the rate of exchange on the date the incident occurred. As regards State liability (cf. Sections 40 and 41), where a specific incident is concerned, the States that have acceded to the Supplementary Convention may agree on another date.

Section 2 - Exemptions

1. The Ministry may exempt from the provisions of this Act, either in whole or in part, certain types of nuclear installations, nuclear fuel, radioactive products or nuclear substances which, in the Ministry's own opinion, constitute no significant hazard.

2. If a question arises as to the liability of the operator of a nuclear installation in another Contracting State, any corresponding exemption as well as the scope thereof shall be governed by the statutory provisions of the Installation State, within the limits of the relevant Convention to which Norway is also a Party.

Section 3 - Two or more installations on the same site

1. The Ministry may determine that two or more nuclear installations having the same operator and which are situated on the same site shall be considered in whole or in part as a single installation for the purposes of this Act.

2. If one or more plants, in which radioactive material is located, are situated within the site of one nuclear installation or of two or more nuclear installations which constitute one and the same installation, such plant or plants shall be considered part of the said nuclear installation.

3. The Ministry may prescribe the boundaries of an installation site.

CHAPTER II - CONCESSIONS, PERMITS, SUPERVISION, ETC.

Section 4 - Concessions for nuclear installation

It shall be unlawful to construct, own or operate a nuclear installation without a concession granted by the King. Such concession shall be valid for a specified place of operation. As a rule the duration of the concession should be limited to a specified period. A separate concession is required for the transfer of a nuclear installation or the operation thereof to a new owner or operator.

A concession for the construction of a nuclear power plant should not be granted before the Storting has given its approval. The matter should be submitted to the Storting when proposals for the construction site of the

Section 8 - Conditions for the grant of a concession or permit

1. The grant of a concession or permit shall be subject to such conditions as are considered necessary having regard to safety requirements and the public interest.

2. The Ministry may amend the conditions laid down and impose fresh conditions for the concession or the permit when this proves necessary for the safety requirements or for ensuring indemnity protection. If such fresh conditions entail an unreasonable alteration in the economic conditions upon which the recipient of the concession or permit had based his assumptions, and they exceed that which ordinarily follows from his obligation to maintain the installation and equipment in good and proper order and to secure it against causing damage, the Court may grant him compensation from Government funds to the extent that this is found reasonable.

3. Upon the application of the recipient of the concession or permit the Ministry concerned may make such amendments or additions as it deems fit.

Section 9 - Revocation of concessions and permits

A concession of permit may be revoked when:

a) it becomes apparent that major prerequisites therefor did not exist;

b) conditions or orders, which have been imposed or given in pursuance of statutory provisions, are being substantially or repeatedly disregarded;

c) the installation or operation is not completed or carried out in reasonable time; or

d) considerations of safety so require.

Section 10 - The Nuclear Energy Safety Authority [Statens Atomtilsyn]

1. The Nuclear Energy Safety Authority shall be directed by an executive board the members of which, together with their personal deputies, shall be appointed by the King for a term of four years. The King shall decide on the composition of the executive board.

2. The Nuclear Energy Safety Authority shall, as the highest specialist agency as far as questions of safety are concerned, function as the institution making recommendations and giving advice to the Ministry concerned. The said Authority shall prepare and submit recommendations on all applications concerning concessions and permits. The Authority shall on its own initiative put into effect all such measures as it deems necessary for reasons of safety. It shall be the duty of the Authority to supervise that all rules and conditions pertaining to safety precautions are complied with and are put into effect, as well as such orders as are given in pursuance of this Act.

3. The King shall issue further rules concerning the organisation and functions of the Nuclear Energy Safety Authority. The King may also issue further rules concerning the relationship between the said Authority and other supervisory authorities.

Section 11 - Construction and commencement of operations of nuclear installations

1. The Nuclear Energy Safety Authority shall exercise continuous supervision over the construction of nuclear installations. In particular it shall ensure compliance with the terms and provisions of the concession, as well as ensuring the implementation of all necesary measures which safety precautions require, including such safety measures as are described in the provisionally authorised safety reports. Measures described in the safety reports may be altered by the Nuclear Energy Safety Authority provided this does not conflict with considerations of safety.

2. Before a nuclear installation is put into operation, the operator must have obtained authorisation for this from the Nuclear Energy Safety Authority. Before granting such authorisation the Authority must be satisfied that:

a) the technical standards of the installation, the operating regulations, safety measures and accident emergency plans are sound;

b) the management and personnel of the installation have the necessary qualifications and clearly defined spheres of responsibility;

c) security has been furnished in accordance with Section 35 (cf. Section 37) of this Act;

d) all the necessary authorisations have been obtained in accordance with other legislative provisions.

3. In good time before the nuclear installation is put into operation the operator shall submit to the Nuclear Energy Safety Authority a complete safety report on the installation concerned.

4. The Nuclear Energy Safety Authority may, if it believes this will assist it in its appraisal of the installation, give separate consent to a limited trial operation, subject to such conditions as may appear necessary.

Section 12 - Changes in installation and operating conditions

If an operator proposes to make an alteration in the construction, operation or management of the installation which constitutes a departure from the conditions on the basis of which authorisation was granted under Section 11, subsection 2 and which may affect safety, he must submit the matter to the Nuclear Energy Safety Authority for authorisation before the alteration is put into effect.

Section 13 - Supervision of operations

1. The operation of a nuclear installation shall be subject to the continuous supervision of the Nuclear Energy Safety Authority. The said Authority shall ensure that the conditions for the grant of a concession are observed, that the requirements of Section 11, subsection 2 are satisfied at all times and that the operations of the installation (including the disposal of radioactive waste) are consistent with the operating regulations and are sound in all other respects.

2. The Nuclear Energy Safety Authority may give such instructions as are necessary to ensure that the requirements of subsection 1 of this Section are satisfied. If necessary the said Authority may order that the installation shall cease operations for such period as it deems fit.

3. Activities, which are subject to permit or notification requirements as laid down in, or given in pursuance of, Section 5, are subject to continuous supervision by the Nuclear Energy Safety Authority unless the King decides otherwise. The same applies to activities for which provisions have been enacted under Section 6. The authority concerned shall ensure that adminstrative provisions and conditions of permit are complied with, and that the said activities are conducted on a sound basis. To ensure this the authority concerned shall issue such instructions as it deems fit. The King may issue further rules with regard to the supervision.

Section 14 - Inspection, implementation of orders, etc.

1. The Nuclear Energy Safety Authority may at any time demand access to a nuclear installation and the surrounding area. It shall be the duty of everyone associated with the installation, notwithstanding any obligation he may otherwise have with regard to the preservation of secrecy, to furnish the said Authority with all the particulars it needs in order to exercise its supervision.

2. If an order is not obeyed the Nuclear Energy Safety Authority may request compulsory execution by the authorities competent to exercise execution, proceedings (namsmyndighetene) or assistance from the police. In cases of emergency the said Authority may also have the necessary safety precautions taken on its own initiative at the expense of the owner of the installation and the operator. The public authorities' claim for reimbursement of such expenditures may be enforced by distraint upon the owner and operator of the installation concerned.

3. The provisions in subsection 1 and 2 apply correspondingly to the supervisory authority under Section 13, subsection 3 in relation to activities subject to its supervision.

Section 15 - Obligation to take safety precautions

1. It shall be the duty of the operator of a nuclear installation to maintain the installation and equipment in sound and proper order and to take all necessary measures to ensure that no damage will be caused as a result of

radioactivity or other hazardous features of such nuclear fuel or radioactive products which are to be found on the installation site, or which are removed or discharged therefrom, or which are undergoing transportation on the operator's behalf.

2. Similarly it shall be the duty of the operator to take the necessary measures to ensure that the installation does not become a danger to public safety after operations have been discontinued.

3. Such measures require the approval of the Nuclear Energy Safety Authority.

4. It shall be the duty of the operator and all other persons concerned with nuclear fuel or radioactive products to take all necessary measures to ensure that no damage is caused as a result of radioactivity or other hazardous properties of the material.

Section 16 - Notification of operational interruptions and accidents

It shall be the duty of the operator of a nuclear installation to notify the Nuclear Energy Safety Authority without delay of any accidents and any operational interruptions whatsoever which may have an important bearing on safety. The same applies to anyone engaged in activities which are subject to permit or notification requirements as laid down in, or given in pursuance of, Section 5, although in such a case the supervisory authority mentioned in Section 13, subsection 3 takes the place of the Nuclear Energy Safety Authority.

Section 17 - Ship's reactors, etc.

The King may issue special administrative provisions for nuclear installations which are used or intended to be used in vessels or on other means of transport, and for the admission of such means of transport to Norwegian territory and their operation therein. Where special circumstances so warrant, the administrative provisions may contain rules which differ from the provisions of this Act, including rules on supervision, concessions and competent authorities.

CHAPTER III - COMPENSATION AND INSURANCE - NUCLEAR LIABILITY

Section 18 - Territorial scope

1. Damage caused by a nuclear incident which occurs in a non-contracting State shall not entitle the injured Party to claim compensation under this Chapter. The same applies to nuclear damage which occurs in such a State, unless the incident occurred within this realm and the operator of a nuclear installation here is otherwise liable in respect of the incident under the provisions of this Chapter. If the operator of a nuclear installation in a foreign country is liable in respect of the incident, the provisions of the

Installation State respecting the territorial scope of the liability shall determine whether the operator is liable under this Chapter in respect of nuclear damage that has occurred in a non-contracting State.

2. The King may decide that the provisions of this Chapter shall apply, in whole or in part, to nuclear damage which has taken place in this realm or in another contracting State or on the open sea, even if the incident has occurred in a non-contracting State. Such a decision may be made conditional upon reciprocity between Norway and the Contracting State concerned where the nuclear damage has taken place or where the injured Party is domiciled.

3. The King may further decide that no compensation shall be payable under this Chapter or under other provisions concerning compensation in respect of nuclear damage which has taken place in a non-contracting State, except insofar as there is reciprocity by virtue of the legislation of such State or by virtue of an agreement. The King may make such decision generally applicable or applicable in relation to specified States.

4. Notwithstanding the provisions of this Section, recourse may be had against the operator concerned in accordance with the provisions of Section 28.

Section 19 - Equating a non-contracting State with a Contracting State

The King may decide that a non-contracting State may be equated in whole or in part with a Contracting State for the purposes of the provisions of this Chapter.

Section 20 - Operator's liability for a nuclear incident in a nuclear installation

The damage shall be liable to pay compensation for nuclear damage caused by a nuclear incident which occurs in his nuclear installation. However, this does not apply to nuclear damage which is attributable exclusively to the presence of nuclear substances which are merely stored temporarily in the installation incidental to their carriage, provided that another operator is liable for the damage by virtue of a written contract and such liability is compatible with the provisions of Section 21 (cf. Section 23).

Section 21 - Liability in the course of carriage

1. If a nuclear incident occurs during the carriage (including temporary storage incidental to carriage) of nuclear substances from a nuclear installation in this realm or in another Contracting State, the operator of such installation shall be liable to pay compensation for nuclear damage which is attributable to the presence of such substances, save as otherwise provided in the succeeding subsections of this Section.

2. If the incident occurs after the substances have been taken in charge by the operator of another nuclear installation in this realm or in another Contracting State, such operator shall be liable instead to pay compensation,

save insofar as another date for the transfer of liability has been expressly stipulated by written contract between the consignor and the consignee. If the nuclear substances are being carried to, and are intended for use in, a nuclear reactor which acts as a source of power in a means of transport, the consignor is free of liability for any nuclear incidents which occur after the date on which the legally authorised operator of the said nuclear reactor installation in such means of transport has taken the substances in charge.

3. If the nuclear substances are consigned from a non-contracting State to a nuclear installation in this realm or in another Contracting State with the written consent of the operator of such installation, the latter shall be liable for any nuclear incident which occurs in the course of carriage. If nuclear substances are consigned from a nuclear reactor installation which acts as a source of power in a means of transport, to a nuclear installation in this realm or in another Contracting State, the consignee shall be liable for any nuclear incident which occurs after he has taken the substances in charge.

4. The consignor and the consignee shall both be liable in accordance with the provisions in the Paris Convention and in the Vienna Convention respectively, with regard to any nuclear incident which occurs during the carriage of nuclear substances from a nuclear installation in a foreign State, which is a Party to only one of the said Conventions, to a nuclear installation in a foreign State which is a Party to the other Convention only.

5. If at the time of the incident the nuclear substances concerned are being carried between countries which are not Contracting States or equated with such States, and if the nuclear incident occurs in Norwegian territory or on the high seas outside Norwegian territory, the general rules on compensation shall apply. The operator concerned or any other person on whose behalf the consignment is effected shall be liable irrespective of fault for the damage.

6. The King may issue administrative provisions respecting the cases in which, and the conditions subject to which, operators of nuclear installations in this realm shall or may enter into a contract respecting the transfer of liability under this Section (cf. subsections 1-3).

Section 22 - Operator's liability in other cases

If at the time of the incident nuclear substances which have caused damage are neither located in a nuclear installation nor being transported, the Party liable for the nuclear damage shall be the operator of the nuclear installation in a Contracting State who had the nuclear substances in his possession at the time of the incident or most recently prior to the incident, or who has explicitly assumed the liability in a written agreement. However, if the nuclear substances were in the course of carriage and if no operator in a Contracting State had acquired possession thereof between the interruption of the carriage and the incident, compensation for the damage shall be payable by the operator or other person who at the time when the carriage was interrupted was liable by virtue of Section 21 in respect of nuclear incidents in the course of carriage. If the nuclear substances had last come from a non-contracting State in any other manner, and no operator in a Contracting

State had acquired possession thereof prior to the incident, the provisions of Section 21, subsection 5 shall apply correspondingly.

Section 23 - Carrier's assumption of liability

The King may, upon the application of a carrier or similar person who undertakes carriage coming within the scope of Section 21, decide that the applicant shall be liable instead of the operator of a nuclear installation in this realm for nuclear incidents occurring in the course of carriage. Such decision may not be taken without the consent of the operator or in the absence of a declaration of security in accordance with Section 37. If such decision is taken, whatever applies by virtue of this Act to the operator shall apply instead to the applicant as regards a nuclear incident in the course of carriage. The same shall apply where a corresponding decision is taken by virtue of the law of another Contracting State as regards any damage for which the operator of a nuclear installation in such State would otherwise be liable.

Section 24 - Absolute liability, etc.

1. The operator is liable even though he is not at fault for the damage.

2. The operator of a nuclear installation in this realm shall not be liable under the provisions of this Chapter if the nuclear incident is directly due to an act of war or similar act in the course of an armed conflict, invasions, civil war or insurrection, or if it is directly attributable to a grave natural disaster of an exceptional nature. In such cases the liability of an operator of a nuclear installation in a foreign country shall be governed by the law of the Installation State.

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

Section 25 - Special provisions concerning damage to the installation itself and to means of transport

1. Subject to subsection 3 of Section 27, the provisions of this Chapter shall not apply to damage caused to the nuclear installation itself, other nuclear installations on the same installation site, including installations that are under construction, or damage to any property which at the time of the incident was on the installation site and was being used or was there to be used in connection with any of the said installations.

2. Subject to the limitations given in subsection 3 of Section 30, the liability of an operator of a nuclear installation in this realm also comprises damage which is caused in the course of carriage to the means of transport on which the nuclear substances causing the damage were located when the nuclear incident occurred. If the operator of an installation in another Contracting State is liable in respect of the incident, the question of his liability for damage to the means of transport shall be decided in accordance with the law of the Installation State.

Section 26 - Contributory responsibility of injured Party

If an injured Party has contributed to the damage either wilfully or through gross negligence the compensation may be modified.

Section 27 - Claims against persons other than the operator

1. Claims for compensation for nuclear damage may not be brought against any person other than the operator concerned or his insurer or guarantor, provided that the operator is liable under the provisions of this Chapter or under corresponding provisions in another Contracting State. The same applies even if the claim against the operator etc. has been extinguished by reasons of statutory limitations (cf. Section 34).

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

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

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

5. The provisions of Sections 39-44 shall apply as regards cover out of government funds.

Section 28 - Recourse against the operator

1. Anyone liable to pay compensation in this realm or in a foreign country pursuant to the provisions of Section 27, subsection 4, or pursuant to the legislation of a non-contracting State may claim recourse against the operator or guarantor concerned within the limits applicable to compensation under this Chapter and subject to the exceptions provided for in this Section.

2. If the nuclear incident occurred or the damage arose in a non-contracting State, recourse against the operator, who but for Section 18 would have been held liable for the damage, may only be claimed by a person having his principal place of business in this realm or in another Contracting

State or by the servant of such a person. However, in the case of carriage within the meaning of Section 21, subsection 1, to a consignee in a non-contracting State, the liability of the consigning operator shall not in any circumstances extend to a nuclear incident which occurs after the nuclear substances are unloaded in the territory of the country of destination from the means of transport which conveyed it to that country. In the case of carriage coming within the scope of Section 21, subsection 2, from a consignor in a non-contracting State the liability of the consignee shall not extend to a nuclear incident which occurs before the nuclear substances are loaded on to the means of transport which is to convey it from the territory of the consigning State.

3. Recourse within the meaning of this Section cannot be claimed if the claimant has, by means of a contract with the operator, expressly undertaken to cover damage or is otherwise obliged to provide cover for the damage under Section 33.

4. If an agreement with a foreign State so requires, the King may issue administrative provisions whereby:

a) only nationals of or institutions or enterprises domiciled in a State which has acceded to the Vienna Convention shall be entitled to enforce claims for recourse under this Section against an operator of a nuclear installation in a State which has acceded to the Vienna Convention but not to the Paris Convention;

b) claims for recourse in cases coming within the scope of subsection 2 of this Section shall not be enforceable against the operator of a nuclear installation in a State which has acceded to the Vienna Convention but not to the Paris Convention and whereby such State shall not be regarded as a Contracting State for the purposes of the said provision.

Section 29 - Damage which is equated with nuclear damage, etc.

1. If any person has sustained simultaneously both nuclear damage entitling him to compensation under this Chapter and other damage, the entire damage shall be equated with nuclear damage for the purposes of this Chapter to the extent that it is not reasonably possible to separate one type of damage from the other.

2. The provisions of subsection 1 shall not in any way affect the liability of persons other than the operator liable, who by virtue of other legislation may be liable in respect of damage caused by ionizing radiation which does not come within the scope of this Chapter.

Section 30 - Limitation of liability

1. The total liability of the operator in respect of nuclear damage caused by one and the same nuclear incident shall, as a rule, be limited to 60 million SDR. In special cases the King may, having regard to the size and nature of the installation, the extent of the carriage involved as well as

other circumstances, prescribe a different limitation of liability which may not however be less than 5 million SDR.

2. If the nuclear installation of the operator liable is situated in another Contracting State, the law of such State as concerns limitation of liability shall apply, even if Norwegian law is otherwise applicable.

3. If, in the case of a nuclear incident in the course of carriage, nuclear damage is caused to the means of transport on which the nuclear substances causing the damage were located when the incident occurred, liability in respect of such damage shall not have the effect of limiting liability in respect of other nuclear damage to an amount lower than 5 million SDR.

4. The limitation prescribed in subsections 1-3 of this Section shall not apply to interest and litigation costs.

Section 31 - Damage caused by two or more installations

1. If two or more operators are liable for compensation in respect of the same damage they shall be jointly and severally liable towards the injured Parties, but each operator shall be liable only up to the limit of liability established with respect to him under Section 30. However, if the damage is the result of a nuclear incident during the carriage of nuclear substances, and the substances are located on one and the same means of transport, or under temporary storage in one and the same nuclear installation, the maximum total amount for which such operators shall be liable shall be the maximum limit of liability established with respect to any of them under Section 30, provided that their nuclear installations are situated in the same State or in States which have acceded to the same Convention.

2. Liability shall be shared by the operators with due regard to each installation's share in the damage and to all other relevant circumstances.

Section 32 - Apportionment of claims exceeding the limitation of liability

1. If the amount of liability under Section 30 (cf. Section 31) is not sufficient to satisfy in full the claims of all injured Parties, the compensation and the relevant interest shall be reduced proportionally. Such reduction must be authorised by a decision of the probate court (skifterett).

2. The Ministry may decide that compensation for personal injuries shall be given preferential liability coverage up to such an amount per person as the Ministry shall determine.

3. If, after a nuclear incident has occurred, there is reason to believe that the total damage will exceed the maximum amount of liability under Section 30 (cf. Section 31), the operator liable and his insurer or guarantor shall ensure as soon as possible that the Ministry shall receive written notification of this fact together with full particulars as to the extent of the damage. In such cases the Ministry may decide that until further notice the injured Parties shall be paid such proportion of their claims for

compensation as, in the light of the claims filed, there is considered to be cover for, or only such proportion as there is cover for after a reserve has been set aside to cover possible subsequent claims.

4. The King may issue administrative provisions to supplement the provisions of this Section. Save as otherwise provided by the King, the Probate Act (skifteloven) shall apply correspondingly, in so far as it is relevant to decisions of the probate court (skifteretten) under this Section. The provisions of Sections 45 and 46 with respect to territorial jurisdiction shall apply to the probate court. The King may decide that a Norwegian probate court shall have jurisdiction if the nuclear installation concerned is situated in this realm irrespective of whether actions concerning liability would otherwise come within Norwegian jurisdiction.

Section 33 - Recourse by the operator

An operator who is liable under this Chapter or corresponding provisions in another Contracting State shall not be entitled to seek recourse against another Party in respect of such liability unless the Party concerned:

a) has expressly undertaken by contract to cover the damage, or

b) is an individual who has himself wilfully caused the damage, or

c) is liable in respect of ionizing radiation within the meaning of Section 39, subsection 2, or

d) is a jointly liable operator (cf. Section 31, subsection 2).

Section 34 - Extinction of claim for compensation after expiry of 10 years

1. Whether or not a claim for compensation or recourse against an operator has become barred by limitation earlier under the general provisions respecting statutory limitation, it shall be extinguished if it is not recognised or a legal action has not been instituted within ten years after the nuclear incident to which it relates.

2. If the nuclear incident is attributable to nuclear substances which have been stolen, lost or abandoned and have not been recovered at the time of the incident, a claim for compensation in respect of nuclear damage caused by such incident shall not lie against the operator after the expiry of twenty years from the date of the theft, loss or abandonment.

3. If under a Convention two or more Contracting States have jurisdiction (cf. Section 45) in respect of the claim for compensation, the claim shall subsist provided that:

a) action for the satisfaction of the claim is instituted in one such foreign Contracting State within the time-limits in force in that State and before jurisdiction is assigned exclusively to another country by a decision of the international Tribunal referred to in

Article 17 of the Paris Convention or in any other manner prescribed by a Convention; or

b) a request is submitted in due time to the appropriate authority in a Contracting State for the institution of proceedings for a decision as to jurisdiction in accordance with the Paris Convention or the Vienna Convention.

Where jurisdiction is assigned to Norway by a decision within the meaning of sub-paragraph (a) or sub-paragraph (b) above, the effect of the timely judicial proceedings or request shall be extinguished if the claim is not subsequently instituted in this realm within such period as may be fixed by the said international Tribunal or in any other manner prescribed by a Convention or - if no such period is fixed - within six months after the date of the decision.

4. This Section shall not apply to the State's right of recourse against operators under Section 39, subsection 2, sub-paragraph (b) or Section 44.

Section 35 - Insurance or other security

1. In order to cover liability in respect of nuclear damage under this Chapter or corresponding provisions in another Contracting State, the operator of every nuclear installation in this realm shall take out and maintain in force such insurance or shall furnish such other security as the Ministry sees fit to authorise.

2. The Ministry may, however, approve insurance or other security which is limited to a fixed amount per installation for a certain term, and which consequently does not fully cover the maximum liability in respect of every possible nuclear incident (cf. Section 30), provided that the amount is at least 20 per cent greater than the maximum liability for each separate incident. If the damage that has occurred is believed to have resulted in the insurance or the security having fallen below the maximum liability per incident, the Ministry shall revoke the authorisation until such time as the insurance or security has been brought up to the original amount.

3. The Ministry may approve separate insurance or other security to cover liability in respect of nuclear incidents which may occur in the course of carriage.

4. It shall be the duty of the operator to obtain in good time the Ministry's decision as to when an insurance or security must come into force. The Ministry shall decide with binding effect on the operator how long the latter shall be required by law to maintain an insurance or security in force.

Section 36 - Exemption for the State; security in the form of a State guarantee

1. The State shall not be required to furnish security.

2. Where the public interest so requires, the King may, by means of a State guarantee, within such limits and subject to such conditions as the

Storting may prescribe, furnish security within the meaning of Section 35 in favour of an operator.

Section 37 - Declaration of security

1. The insurer or the person furnishing security (hereinafter referred to as "the guarantor") shall submit to the competent authority a declaration of security in favour of possible injured parties, in such form and containing such particulars as the Ministry may prescribe. Every declaration of security shall confirm, inter alia, the following conditions which shall apply to the security until such time as it is replaced by a new authorised security:

a) the injured Parties shall be entitled to deal directly with the guarantor notwithstanding the relationship between the latter and the operator liable;

b) the security shall be valid for an unlimited period and irrespective of any change in the identity of the owner or operator of the nuclear installation. However, security for carriage may be limited to the duration of the carriage. The Ministry shall moreover have general power to authorise in special circumstances security of limited duration;

c) the security may only be revoked or otherwise terminated upon at least two months' prior notice in writing to the competent authority. As far as a nuclear incident is concerned which occurs in the course of carriage commenced before the notice reached its destination the security shall remain in force during the period of the carriage in question;

d) in the case of damage caused by a nuclear incident which occurs while the security is in force, the injured Parties may also invoke the security after it has been terminated.

2. If and as soon as a claim for compensation can be enforced in this realm under this Chapter, the provisions in subsection 1, (a)-(d) of this Section shall automatically apply correspondingly as regards the claim, notwithstanding that the relationship between the guarantor and the operator is otherwise governed by the legislation of a foreign country and whether or not the installation of the operator liable is situated in a foreign country.

Section 38 - Certificate of financial security for carriage

1. Whenever a nuclear substance is consigned to or from a foreign country (including cases involving transit through this realm) the operator liable pursuant to this Chapter shall furnish the carrier with a certificate issued by or on behalf of the insurer or other guarantor who has furnished security to cover the liability. The carrier may not commence carriage in this realm before obtaining the certificate. The certificate shall contain the following:

a) the name and address of the operator liable and particulars as to the material and the carriage in respect of which the security applies and as to the amount, type and duration of the security; and

b) a declaration from the authority appointed by the Ministry (or from the competent authority in a foreign country, where appropriate) to the effect that the person named is an operator within the meaning of the Paris Convention or of the Vienna Convention.

2. The person issuing a certificate or the person on whose behalf it is issued shall be responsible for ensuring that the certificate correctly gives the name and address of the operator liable and the amount, type and duration of the security.

3. The Ministry may issue rules respecting the form of the certificate.

Section 39 - State responsibility for fulfilment of operator's liability

1. Within the limits of the amount of liability prescribed in Section 30, subsection 1 (cf. subsections 3 and 4), the State shall guarantee fulfilment of the liability in respect of nuclear incidents which operators of nuclear installations in this realm have by virtue of this Chapter or corresponding provisions in another Contracting State. However, this does not apply to possible liability in respect of nuclear incident as provided for in Section 24, subsection 2.

2. The State may only claim recourse for expenditure under this Section:

a) from a person who is liable for recourse to the operator concerned under Section 33;

b) from the operator himself if he has failed to discharge his obligation to take out and maintain in force insurance or to furnish other security in accordance with Section 35, or if the security has expired; or

c) from the guarantor concerned, insofar as he is liable in respect of the damage.

Section 40 - Supplementary payments out of Government Funds under the Supplementary Convention

1. To the extent that a claim for compensation against an operator of a nuclear installation used for peaceful purposes situated in this realm or in another State which has acceded to the Supplementary Convention cannot be satisfied by reason of the limitation of liability under Section 30 (cf. Section 31), but can in other respects be brought - and has been brought in due time - against the operator in accordance with the provisions of this Chapter, the claims shall be paid out of Government Funds up to the limits prescribed in Section 41 provided that:

a) at the time of the incident the installation of the operator liable was included in the list referred to in Article 13 of the Supplementary Convention; and

b) actions in respect of the operator's liability come under Norwegian jurisdiction by virtue of Section 45; and

c) the nuclear incident did not occur exclusively in a State which has not acceded to the Supplementary Convention; and

d) the claims relate to nuclear damage which has arisen:

i) in this realm or in another State which has acceded to the Supplementary Convention; or

ii) on or over the high seas on board a vessel or aircraft registered in a State which has acceded to the Supplementary Convention; or

iii) otherwise on or over the high seas, by a national of such a Contracting Party or a person equated by the Contracting Party with its own nationals, provided, however, that it shall be a further condition in the case of damage caused to a vessel or aircraft that at the time of the incident such ship or aircraft was registered in a Contracting Party.

2. For the purposes of this Section the expression "national of a Contracting Party" shall be deemed to include the State itself, its administrative divisions or units as well as any public corporation or private company, society, foundation, partnership or any other association which has its registered address in, or is otherwise domiciled in, such a State. A person who is domiciled in Norway or in Denmark shall also be equated with a Norwegian or Danish national, as the case may be. The expression "national or another of a Contracting Party" shall, in appropriate cases, be deemed to include a person who is regarded as domiciled in such State by virtue of the legislation thereof and who, by virtue of a decision of the Government of that State, is to be treated as a national as regards entitlement to compensation under the Supplementary Convention.

3. Irrespective of whether the operator is liable, claims arising out of a nuclear incident coming within the scope of subsection 2 of Section 24 or damage within the meaning of Section 25 shall not qualify for payment out of Government Funds under this Section. Claims for recourse under subsection 1 (cf. subsection 3 of Section 28), may so qualify to the extent that this Section is applicable, provided that nothing to the contrary is stipulated in a contract entered into with the operator liable or with the State.

4. The King may decide that the operator or his guarantor, whichever is appropriate, shall, in accordance with the rules prescribed, have charge of the compensation settlement also as regards the supplementary payments.

Section 41 - Limitation of supplementary payments, etc.

1. The aggregate amounts of compensation which may be claimed in respect of nuclear damage resulting from one and the same nuclear incident, partly from the operator or operators liable under the provisions of this Chapter and partly out of Government Funds under Section 40, shall not exceed 300 million SDR. This shall not include interest and litigation costs.

2. If an agreement concerning payment out of Government Funds within the meaning of Article 15 of the Supplementary Convention has been concluded between a Contracting State within the meaning of that Article and another State, and if the agreement covers a nuclear incident to which Section 40 of this Act applies, compensation under such agreement shall also be included in the maximum amount prescribd in subsection 1.

3. If the maximum amount prescribed in subsection 1 (cf. subsection 2) is not sufficient to ensure full satisfaction of all claims, the amounts of compensation together with the relevant interest shall be reduced proportionally. The provisions of Section 32 shall apply correspondingly.

Section 42 - State liability for certain delayed effects of personal injury

1. Liability for compensation which has become extinguished by reason of the 10 and 20-year time-limits stipulated in Section 34 or corresponding provisions in another Contracting State, shall be covered by the State if the claim relates to personal injury sustained in this realm as a result of a nuclear incident for which the operator of a nuclear installation in Norway was liable, provided that there is a valid reason why the claim was not brought against the operator in due time. In order to subsist, the claim must be brought by legal action against the Ministry concerned before the date on which the operator's liability would have been barred by limitation under the general Norwegian provisions respecting statutory limitation and not later than thirty years after the date of the nuclear incident. If other claims arising out of the same incident have not been satisfied in full by reason of the limiting provisions of Section 30 or Section 41 (as the case may be) or by virtue of corresponding provisions in another Contracting State, there shall be a proportionate reduction of the compensation out of Government Funds under this Section.

2. The King may decide that compensation shall be paid under this Section subject to specified conditions, even if the nuclear damage arose outside this realm.

Section 43 - State liability in the case of certain discrepancies between the Paris Convention and the Vienna Convention

1. If the operator of a nuclear installation in this realm would, by virtue of the legislation of two or more Contracting States, partly in accordance with the Paris Convention and partly with the Vienna Convention, be liable to pay amounts of compensation which in the aggregate exceed his maximum liability under Section 30 (cf. Section 31), the King may decide that the State shall pay the amount in excess insofar as this is necessary.

However, this shall not apply where the damage can be covered by a supplementary payment under Section 40 or in any other way under the provisions of the Supplementary Convention.

2. The provisions of Section 40, subsection 4 shall apply correspondingly in respect of the compensation settlement.

Section 44 - The State's right of recourse

Except as otherwise provided under this Chapter or under an agreement with a foreign State, the State may only claim recourse in respect of disbursements under Sections 40 to 43 from an individual who has himself caused the damage wilfully, from a person who is liable for ionizing radiation within the meaning of Section 29, subsection 2 or, under the terms of a contract, from a person who has expressly undertaken to cover the damage. The same shall apply, as regards recourse for other payments under the Supplementary Convention arising out of a nuclear incident for which the operator of a nuclear installation in this realm or in another Contracting State is liable under the legislation in any such State.

Section 45 - Norwegian jurisdiction

1. Actions concerning the liability of an operator or his guarantor in respect of nuclear damage under this Chapter shall be brought in a Norwegian court of law:

a) if the nuclear incident has occurred wholly or partly in Norwegian territory or (in cases to which Section 21, subsection 5, cf. Section 22, is applicable) on the high seas outside Norwegian territory; or

b) if the nuclear installation concerned is situated in this realm and the incident occurred outside the territory of any Contracting State or the place of the incident cannot be determined with certainty.

2. Actions concerning claims against an operator or his guarantor under Section 27, subsection 3, second sentence, Section 31, subsection 2, Section 39, subsection 2 or Section 44 may also be brought in Norway if a Norwegian court has jurisdiction under the general rules of procedure.

3. Notwithstanding the above, actions concerning liability may not be brought or continued in a Norwegian court under this Section if:

a) the international Tribunal referred to in Article 17 of the Paris Convention decides that the courts in another Contracting State shall have exclusive jurisdiction as regards actions concerning liability; or

b) the King decides, in order to comply with provisions concerning jurisdiction contained in an agreement with a foreign State, that the case shall not come within Norwegian jurisdiction.

4. The competent Ministry may, either on its own initiative or at the request of an interested Party, request the aforesaid international Tribunal to decide in which State actions shall be brought. If it is necessary in order to comply with provisions concerning jurisdiction, etc., in an agreement with a foreign State or to secure the bringing of claims against an operator of this realm or his guarantor in accordance with the provisions of this Chapter, the King may decide that actions concerning liability for a nuclear incident shall come within Norwegian jurisdiction, even in cases where this does not follow from the provisions of subsection 1 or subsection 2 above.

Section 46 - Local jurisdiction in this realm

1. Except as otherwise provided below in this Section, actions which, under Section 45, come within Norwegian jurisdiction may only be brought in the judicial district in this realm in which the nuclear incident occurred.

2. If the nuclear incident occurred outside the realm, actions may only be brought in the judicial district in which the relevant nuclear installation in Norway is situated, or (where the case relates to the liability of an operator of a nuclear installation abroad) in accordance with Section 39 of the Administration of Justice Act (domstolloven).

3. If under the foregoing provisions actions concerning liability in respect of the same nuclear incident can be brought in more than one judicial district, the Ministry concerned shall decide where the case is to be tried. However, actions coming within the scope of Section 45, subsection 2 may nevertheless be brought in any judicial district having jurisdiction of the case by virtue of the general rules of procedure. On receipt of an application the Ministry may also decide on the question of jurisdiction if it cannot be determined with certainty in which judicial district actions must be brought in accordance with the foregoing provisions. Chapter 2 of the Administration of Justice Act (domstolloven) shall apply.

4. Proceedings against the State under Sections 39-43 shall be brought in the judicial district having jurisdiction under the foregoing provisions of this Section to try actions against the operator in respect of the same nuclear incident.

Section 47 - Recognition and enforcement of foreign judgments

1. A judgment against an operator or his guarantor in a case concerning liability in respect of nuclear damage shall have binding effect and shall be enforceable in this realm subject to the limitation of liability under Section 30 (cf. Section 31), if such judgment has been pronounced in accordance with the Paris Convention or the Vienna Convention by a court of law in a Contracting State and is enforceable in that State. This shall not apply to interim judgments. Enforcements shall be effected in accordance with the provisions of the Compulsory Enforcement Act and there shall be no review of the merits of the case other than that allowed by the relevant Convention.

2. An application for the enforcement of a foreign judgment shall be made to the competent court of execution proceedings (namsrett) together with:

a) certified copy of the judgment;

b) a declaration from the authorities in the country of the court that the judgment concerns compensation for nuclear damage by virtue of the provisions of the Convention and that it is enforceable in that country; and

c) an authorised translation into Norwegian of any document in a foreign language other than Danish or Swedish.

3. The provisions of this Section shall apply correspondingly to judicial settlements having the force of a court judgment.

Section 48 - Ship's reactors, etc.

1. In the absence of any express provision to the contrary, the provisions of this Chapter shall not apply to a nuclear reactor which is comprised in a vessel or other means of transport and which is used or intended for use as a source of power.

2. The King may make the provisions of this Chapter wholly or partly applicable, with the necessary modifications, to such nuclear reactors. The King may also lay down rules which are wholly or partly based on international agreement, even if Norway has not acceded to the agreement concerned. In all cases the operator's liability may be limited to such amounts as the King determines. Provisions made pursuant to this subsection may be made generally applicable or be applicable to a particular vessel or other means of transport only.

CHAPTER IV - MISCELLANEOUS PROVISIONS

Section 49 - Public safety precaution measures

The King may decide that municipal and county authorities in the area in which a nuclear installation has been or is being constructed, or in the danger area surrounding such installation, shall collaborate with the operator with respect to safety measures for the protection of the population in the area. Under rules to be issued by the King a plan should be prepared for safety and relief measures in the event of an incident including, where necessary, compulsory evacuation.

Section 50 - Registration etc. of damage

Where a nuclear incident has occurred the Ministry may order that all persons who were in the danger area at the time of the incident shall notify the health council or the police of that fact within a specified time-limit and furnish the information required for the registration of damage and potential damage and undergo a medical examination upon summons or notification by the health authorities.

Section 51 - Supervision to ensure the peaceful utilisation of nuclear energy

The King may issue such administrative provisions as are necessary to ensure and to ascertain by supervision that nuclear installations, equipment for nuclear installations, nuclear fuel, radioactive products and other materials used for nuclear energy purposes which are subject to international safety control pursuant to agreements to which Norway is a Party are used for peaceful, non-explosive purposes only. for the purpose of supervision Norwegian inspectors shall have access to nuclear installations and other places where the aforesaid materials and equipment are located or are presumed to be located. The inspectors are entitled to the information they consider to be necessary in order to determine whether such installations, equipment or materials are used for peaceful, non-explosive purposes only. To the extent that an agreement on international safety control to which Norway is a Party so provides, foreign inspectors shall also have the right to information and, shall, when accompanied by Norwegian inspectors or persons so authorised, have access to nuclear installations etc. in accordance with the second sentence.

Section 52 - Right of pre-emption and requisition

Whenever necessary to secure supplies for public needs the Government may, subject to compensation, requisition nuclear fuel and radioactive products. To the extent that the material is required for purposes of supervision, it may be requisitioned without compensation.

Section 53 - Obligation to preserve secrecy

Subject to the limitations arising out of the duties specified in this Act, it shall be the duty of every person to preserve secrecy respecting technical or business secrets which come to his knowledge by reason of his position according to this Act or concerning other circumstances which are not public knowledge. Nor may such person use such information for commercial purposes.

Section 54 - Provisions to supplement this Act

The King may issue administrative provisions to supplement this Act.

Section 55 - Penal provisions

1. Any person who:

a) wilfully or through negligence violates any provision given in, or in pursuance of, Chapter II of Sections 50, 51, 53 or 54; or

b) in contravention of the provisions of this Act, fails to take out insurance or to maintain it or to comply with orders respecting other security under Section 35;

shall be liable to a fine or to imprisonment for a period not exceeding one year, or to both such penalties.

2. Anyone who is guilty of complicity in such offences shall be liable to the same penalties.

Section 56 - Confiscation

Nuclear fuel and radioactive products with which anyone has been concerned in violation of the provisions given in, or in pursuance of, Chapter II or Section 51 or 54, may, by virtue of a judgment, be confiscated from the guilty Party or from the person on whose behalf the guilty Party has acted, without penal proceedings having been, or been capable of being instituted against anyone.

Section 57 - Fees and dues

1. A fee shall be payable for the consideration by the authorities of an application for a concession.

The fee shall accompany the application for a concession or be paid at such installment rates as the Ministry determines.

2. For the supervision undertaken by the Nuclear Energy Safety Authority in connection with the construction and operation of nuclear installations, dues covering such supervision shall be paid.

3. The said fees and dues shall be determined by the King.

Section 58 - Entry into force, etc.

This Act shall enter into force from such date as decided by the King. Sections 40 and 41 may be brought into force at a later date than that applicable to the remainder of the Act.

This Act shall also apply to Syalbard (Spitzbergen), Jan Mayen and the Norwegian non-metropolitan territories, except as otherwise provided by the King. The King may prescribe such amendments as the local conditions may require.

The operator of a nuclear installation which is under construction or in operation at the entry into force of this Act shall, within three months of that date, make application for a concession and authorisation under Chapter II. The Ministry may give temporary permission until such time as the application has been determined.

Section 59 - Amendments to other Acts

1. Upon the entry into force of this Act, the following provisions of the Act of 27th February 1930 (No. 3) concerning Bouvet Island, Peter 1 Island and Queen Maud Land etc., shall be amended to read:

Section 3

Without the consent of the King it shall be prohibited to carry out a nuclear explosion or to dispose of radioactive waste in the area referred to in Section 1. The prohibition shall also apply to complicity in such offences.

Section 8

Any person who wilfully or through negligence violates Sections 4 and 5 of this Act or provisions issued under the said Sections or under Section 7 shall be liable to a fine or to imprisonment for a period not exceeding one year or to both such penalties.

2. On the same date the following provisions of the Act of 17th June 1966 (No. 12) concerning National Insurance shall be amended to read:

Section 11-12, subsection 4

In the case of accidents qualifying for compensation under the Act on compensation for damage caused by motor vehicles (the Motor Vehicle Liability Act) or under the Act concerning Nuclear Energy Activities the provisions of subsection 2, sub-paragraph (c) (cf. subsection 1), shall not entail any restriction of the injured Party's right to claim full compensation of the insurance sum under the Motor Vehicle Liability Act or the limited liability amount under the Nuclear Energy Act respectively with regard to that proportion of the damage which is not covered by the payments he receives from the National Insurance Scheme under this Chapter.

Section 11-12, subsection 5, second paragraph

The compensation which the injured Party or his survivors may claim from other persons under the provisions of this Section shall be determined in accordance with general legislative provisions. However, if the injury has been caused by a motor vehicle, used under an insurable activity or by a nuclear incident which has occurred under an insurable activity the claim for compensation shall lapse as regards an amount corresponding to the Insurance Scheme's expenditures and liability on account of the damage.

3. On the same date, sub-paragraph (d) of the first paragraph in Section 2 of the Act of 3rd February 1961 concerning compensation for damage caused by motor vehicles (the Motor Vehicle Liability Act), shall be amended to read:

"d) is nuclear damage within the meaning of Chapter III (compensation and insurance) of the Act concerning Nuclear Energy Activities."

4. On the same date the following new fourth paragraph shall be inserted in Section 33 of the Act of 20th June 1964 No. 5 concerning drugs and poisons:

"This Section shall not apply to a person holding a corresponding permit under the Act concerning Nuclear Energy Activities".