

NUCLEAR LAW Bulletin

number 4

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European Nuclear Energy Agency

Organisation for Economic Co-operation and Development



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LEGISLATIVE AND REGULATORY ACTIVITIES

• *Australia*

MARITIME CARRIAGE OF RADIOACTIVE SUBSTANCES

The requirements of Australian law governing the packing, stowing and carriage of radioactive substances in ships are set out in the Navigation Regulations and in Determinations issued under those Regulations from time to time. This legislation closely follows the International Atomic Energy Agency Regulations for the Safe Transport of Radioactive Materials.

The Australian Department of Shipping and Transport recently published a Compendium of Notes for the guidance of persons concerned in the carriage of radioactive substances by sea which is designed to assist persons concerned with the consignment and carriage of radioactive cargoes to meet the legislative requirements. These Notes, which have no legal force or effect, constitute in fact the Regulations which will be shortly passed in this field under the Navigation Regulations. For example, Notice MSB8/1969, which is to be found as Appendix III of the Notes, gives in fact the Regulations which will henceforth be observed in Australia for incoming and outgoing shipments. A summary of this Notice is given here below.

Notice to Shipowners, Shipmasters, Stevedoring Firms, Shippers and Others Concerned

RADIOACTIVE CARGO

According to this Notice, shipments of radioactive materials from Australia must comply with the IAEA Regulations for the Safe Transport of Radioactive Materials, as incorporated in the Determinations made under the Navigation (Dangerous Goods) Regulations, and with the Navigation (Cargo Hazards Prevention) Regulations. Shipments to Australia must comply with the Navigation (Cargo Hazards Prevention) Regulations.

In the case of all exports a Notice of Intention to ship dangerous goods must be forwarded to the regional controller by the shipper. This notification is in addition to any notifications required by the IAEA Regulations.

Imports of large radioactive sources and fissile Class III packages

In accordance with the IAEA Regulations prior notification is to be given to the Department of Shipping and Transport of all shipments of large radioactive source packages and of fissile Class III packages for which special precautions have been specified by the Department at the time of the package design approval.

For imports of shipments under special arrangements, where the package does not meet all relevant parts of the IAEA Regulations, approval of the shipments must be sought well in advance of the intended date of shipment. On arrival, radiation monitoring will be arranged by this Department in consultation with the Department of Health.

For imports of other radioactive sources, an inspection will be made by a surveyor of the Department of Shipping and Transport in the first Australian port of call.

Exports of large radioactive sources and fissile Class III packages

In accordance with the IAEA Regulations, shipments of such packages must have the approval of the competent authority in the country of origin. In Australia the approval of the shipments shall be obtained by lodging a Shipper's Certificate with the Department of Shipping and Transport. The shipper is also due to give prior notification to intermediate and destination countries.

For shipments under special arrangements when the packaging or package does not meet all relevant parts of the IAEA Regulations as incorporated in Australian Regulations, full information about the package must be submitted before the Shipper's Certificate can be completed. Radiation monitoring will be arranged by the Department of Shipping and Transport at the port of loading.

For the exports of other radioactive sources, inspection will be made by a surveyor of this Department at the port of loading.

● *Austria*

RADIATION PROTECTION

Federal Act on Radiation Protection of 11th June 1969 /Official Gazette No. 227/1969/

The Federal Act regarding measures for protecting the life and health of persons and their descendants against injury by ionizing radiations (Federal Act on Radiation Protection), was passed by the Austrian Parliament on 11th June 1969.

This Act, which differs from the Bill (a translation of which was given as a Supplement to Nuclear Law Bulletin No. 3) by changes in the lay-out will not enter into force before 1st January 1971. Therefore, regulations to be issued under this Act cannot be brought into effect at an earlier date.

It is recalled that the Act covers the whole field of radiation protection and contains, in particular:

- provisions concerning the licensing of the building and operation of installations in which radioactive material or radiation-emitting equipment is to be handled;
- provisions concerning the protection of the general public and occupationally exposed persons;
- provisions determining the jurisdiction and control powers of the authorities endowed with the administration of the Act.

• *Denmark*

THIRD PARTY LIABILITY

The drafting of the Nuclear Installations Bill has been delayed and the Bill will not be ready for submission to Parliament during the present session as had been hoped. Accordingly ratification of the Paris Convention by Denmark can hardly be expected before the end of 1970.

• *France*

ORGANISATION AND STRUCTURE

Decree No. 69-724 of 18th July 1969 /Official Gazette of the French Republic of 19th July 1969/

This text lays down the powers of the Minister for Industrial and Scientific Development. In particular, he exercises the powers previously conferred on the Prime Minister in regard to atomic energy, notably those defined in Order No. 45-2563 of 18th October 1945, as amended, setting up the Atomic Energy Commission; accordingly the latter is brought under his authority, without prejudice to the provisions governing the relationship between that body and the Ministry of National Defence.

It should be noted that for the first time the supervisory powers in regard to the Atomic Energy Commission are conferred on the Minister responsible for Atomic Questions in person and no longer exercised by way of delegation from the Prime Minister as heretofore.

RADIATION PROTECTION

Decree No. 69-50 of 10th January 1969 /Official Gazette of the French Republic of 18th January 1969/ and Inter-Ministerial Order of 2nd September 1969 /Official Gazette of the French Republic of 28th September 1969/

The Decree of 10th January 1969 on the procedure for the inventory of the degree of pollution of surface waters, instigates a twelve-month inventory operation under the authority of the Préfet of each department, within the framework of orders made by the Minister for the Plan and Regional Development, who lays down the conditions under which the inventory is to be carried out. The Decree provides in Section 5 that sampling, tests and analyses and the establishment of records shall, as regards tests for radioactivity, be carried out under the direction and supervision of the competent officials of the Ministry of Social Affairs.

The Order of 2nd September 1969, made in implementation of the abovementioned Decree for the purpose of laying down the way in which the inventory of the degree of pollution of surface waters is to be carried out, lays down that methods for radioactivity tests shall be jointly prescribed by the Ministry of Public Health and Social Security and the Atomic Energy Commission. In addition, the Commission's laboratories are approved for the purpose of carrying out the necessary examinations and analyses.

Inter-Ministerial Order of 23rd April 1969 /Official Gazette of the French Republic of 8th June 1969/

This Order lays down the procedure for approval of equipment and installations using ionizing radiations for medical purposes. Practitioners and establishments using for therapy or diagnosis apparatus producing ionizing radiations or involving the use of radioelements must obtain prior approval of each item of equipment and installation kept by them for this purpose.

The equipment and installations requiring approval are subject to different sets of rules according to whether the installations are to be used for medical or dental X-ray diagnosis and contain an electrical generator, or are used for medical radiotherapy and also contain an electrical generator, or whether the equipment or installation involves the use of radioelements. Each particular set of rules is in turn subdivided into several categories. According to the category to which the equipment or installation which is the subject of an application for approval belongs, such approval is given by the Minister responsible for Social Affairs, after obtaining the opinion of the Central Service for Protection against Ionizing Radiations, or by the Préfet, after receiving a favourable opinion from the Central Service for Protection against Ionizing Radiations. This Service also has the duty of carrying out periodical checks on equipment and installations and may have approval withdrawn where there is a hazard for personnel, patients or third parties. Approval is granted for a maximum period of ten years.

As regards artificial radioelements, the possession of which is subject to the system of prior authorization provided for in Section R5234 of the Code of Public Health, application for authorization is deemed to include application for approval.

• Germany

GENERAL REGULATIONS

Acts to amend the Atomic Energy Act of 1959

The year 1969 so far has seen three modifications of the Atomic Energy Act (Atomgesetz) of 23rd December 1959, some of which constitute fairly important alterations. (*) The last amendment to this Act was effected by the Introductory Law to the Act on Statutory Offences (Einführungsgesetz zum Gesetz über Ordnungswidrigkeiten) of 24th May 1968 (BGBl(**) I, page 5037).

1. Legislative measures aimed at reforming the Penal Code also brought about modifications regarding the sanctions contained in the Atomic Energy Act. Section 70 of the First Act to Reform the Penal Code (Erstes Gesetz zur Reform des Strafrechts) of 25th June 1969 (BGBl I, page 6457) amends paragraphs 1 and 2 of Section 44 of the Atomic Energy Act to bring them into line with the new regulations of the Penal Code. This amendment is to come into force on 1st April 1970.

2. Section 2 of the Law Relating to the OECD Council Decision of 19th July 1966 concerning the adoption of radiation protection norms relating to the use of radioluminous paint on watches (Gesetz zum Ratsbeschluss der Organisation für Wirtschaftliche Zusammenarbeit und Entwicklung) of 22nd July 1969 (BGBl II, page 13097) with a view to the enforcement of the OECD Council Decision, extends the scope of regulations which may be made under Section 11, paragraph 1, of the Atomic Energy Act.

3. The most far-reaching changes of the Atomic Energy Act for a long time however are being brought about by the Second Law Amending and Supplementing the Atomic Energy Act (Zweites Gesetz zur Änderung und Ergänzung des Atomgesetzes) of 28th August 1969 (BGBl I, page 14297)(xxx)

The newly inserted Sections 7(a) and 7(b) enable the administrative authorities in charge of licensing nuclear installations on the basis of Section 7 of the Atomic Energy Act, to examine separately special problems, particularly those connected with siting of nuclear installations, and to take a stand on them by giving a preliminary decision before issuing a final licence.

(*) A translation of the full text of the Atomic Energy Act of 23rd December 1959, as amended, is given in the Supplement to this issue.

(**) BGBl: Bundesgesetzblatt (Legal Gazette of the Federal Republic of Germany).

(xxx) See also page 7 of Nuclear Law Bulletin No. 3, April 1969.

Those passages of the Atomic Energy Act dealing with liability are being amended to the effect that liability for damage occurring in the course of transport of nuclear fuel conforms to the provisions of the Paris Convention on Third Party Liability. According to the newly inserted paragraph 2 of Section 25 of the Atomic Energy Act, the operator of an installation to which the Act applies, will be liable to pay compensation for damage as specified in paragraph 1 of Section 25 if it is caused by nuclear fuel in the course of transport from the installation.

Lastly, the obligation of the Federation (Bund), which was originally due to expire on 31st December 1970, to indemnify against liability resulting from a nuclear incident as stated in Section 36 of the Atomic Energy Act, will remain in force if the requisite licence has been granted and operation of the installation or performance of activity has been started before 31st December 1980.

INSURANCE

Second Ordinance regarding the Creation of Reserves for Nuclear Installations

This Ordinance of 14th March 1969 [Bundesanzeiger 1969, No. 58, page 27] amends an earlier one issued on 10th July 1963, i.e. the "Erste Anordnung zur Bildung von Atomanlagen-Rücklagen" [Bundesanzeiger 1963, No. 139, page 17]. According to this amendment, insurance companies, which are under an obligation to build up reserves for insurance of nuclear installations, have to make annual minimum contributions of 20 per cent of the amount of the reserves, but in any case not more than 75 per cent of their annual profit, to keep the minimum required at a more or less steady level.

FEES

Act to Amend Provisions Authorizing the Levying of Fees, and also Extending the Scope of Application of Provisions Relating to the Levying of Fees

By virtue of Section 3, VIII of the abovementioned Act of 22nd July 1969 (Gesetz zur Aenderung von Kostenermaechtigungen und zur Ueberleitung gebuehrenrechtlicher Vorschriften [BGBl I, page 901] the status of the Ordinance Concerning Fees under the Atomic Energy Act (Kostenverordnung zum Atomgesetz) of 2nd July 1969 [BGBl I, page 440] was changed to that of an Act of Parliament. This legislation concerns fees that are levied when granting building and operating licences for nuclear installations, and licences relating to carriage and storage of such fuels, as well as when such fuels are taken into Government custody. Furthermore, this legislation was extended to the Land Berlin.

• *Ireland*

RADIATION PROTECTION

Draft Regulations on Ionising Radiations (Sealed Sources), are being prepared within the framework of the Department of Labour in

(*) Also spelt "ionizing".

consultation with the Department for Health. This text closely follows the provisions of the Ionising Radiations (Sealed Sources) Regulations No.808, published by the United Kingdom in 1969. (See "United Kingdom in the Chapter on Legislative and Regulatory Activities). More detailed information will be supplied as soon as this text is published.

• *Italy*

GENERAL REGIME

Possession, Commerce and Transport of Nuclear Substances

The Act of 31st December 1962 provides a series of requirements as regards the possession, commerce and transport of nuclear substances and makes no exemption from such requirements with the exception of public universities and scientific institutions which are allowed to use radio-isotopes for scientific research without ministerial authorization. However, legislation in other countries Signatory to the Paris Convention make provision for exemptions from the general regime which are justified by the fact that in certain specific cases the use of nuclear substances entails little hazard. Experience has shown that, in practice, the lack of such exemptions has its disadvantages. The purpose of the Bill, the text of which is given below, is to authorize the Minister for Industry, Commerce and Handicrafts to make by Decree derogations from the general regime of authorizations, that would be justified on technical grounds. This Bill has been approved by the Senate and was transmitted to Parliament on 15th October 1969.

Bill Amending the Act of 31st December 1962, No.1860, on the Peaceful Uses of Nuclear Energy^(*)

Single Section

By Decree of the Minister for Industry, Commerce and Handicrafts in agreement with the Minister for Health, after consultation with the National Committee for Nuclear Energy, exemptions from declarations and authorizations prescribed by the Act of 31st December 1962, No.1860, may be allowed in respect of the possession, commerce and transport of small quantities of special fissionable materials, source material and other radioactive materials, subject to precautions being taken for the protection of workers and the population at large against the dangers of ionizing radiations arising from the peaceful uses of nuclear energy.

By source material is meant raw material and ores as defined in Article 197 of the Treaty establishing the European Atomic Energy Community approved by the Act of 14th October 1957, No.1203.

(*) Unofficial translation by the Secretariat.

• *Netherlands*

GENERAL REGULATIONS

General Regulations under the Nuclear Energy Act of 21st February 1963

As mentioned in the third issue of the Nuclear Law Bulletin, the entry into force of the Nuclear Energy Act of 21st February 1963 (with the exception of Chapter II which is already in force) is dependent upon the promulgation of certain regulatory texts which define or supplement the provisions of this Act. Until now five Orders have been finalized and published, but shall apply only when the Nuclear Energy Act comes into force, probably on 1st January 1970.

The five Orders already published are the following:

- The Order of 29th August 1969 bringing into force Section 1 of the Nuclear Energy Act and defining the concepts contained in the Act (The Definition Order) [Stb.^(*) 1969, 358].
- Order of 4th September 1969 bringing into force Sections 16, 17, 19(1) and 21 of the Nuclear Energy Act (The Nuclear Establishments, Fissionable Materials, and Ores Order) [Stb. 1969, 403].
- Order of 10th September 1969 bringing into force Sections 28 to 32 of the Nuclear Energy Act (The Radioactive Materials Order) [Stb. 1969, 404].
- Order of 4th September 1969 bringing into force Sections 16, 19(1), 21, 29, 30(2), 31 and 32 of the Nuclear Energy Act (The Fissionable Materials, Ores and Radioactive Materials Transport Order) [Stb. 1969, 405].
- Order of 10th September 1969 bringing into force Section 34 of the Nuclear Energy Act (The Devices Order) [Stb. 1969, 406].

• *Switzerland*

RADIATION PROTECTION

Order of the Federal Department of the Interior on Radiation Protection in Nuclear Research Institutes, dated 12th September 1969 /Recueil Officiel^(**) 1969, page 565/

This Order, made by the Federal Department of the Interior in implementation of the Order on Radiation Protection of 19th April 1963, lays down safety measures for radiation protection in nuclear research

^(*) Staatsblad (Stb.): Official Gazette of the Kingdom of the Netherlands.

^(**) Recueil Officiel: Official Gazette.

institutes. The institutes covered by the Order are defined in Section 1. The subsequent Sections deal with the installation and erection, within an institute, of radiation sources and define the protective devices with which they must be provided. Workers in the institute whose work takes them regularly into controlled areas are deemed to be "persons exposed to radiations as an occupational hazard". The holder of the authorization, i.e. generally the director of the institute, is responsible for the observance of the regulations concerning radiation protection. A radiation protection expert must be appointed in each institute. Finally, institutes must be equipped with an adequate number of monitoring devices.

The full text of this Order, which came into force on 1st October 1969, is reproduced under the heading "Texts" in the present issue of the Bulletin.

• *United Kingdom*

ORGANISATION AND STRUCTURE

The Ministry of Technology Order 1969, No.1498

As part of the recent reorganisation of certain Ministries of the United Kingdom Government, the Ministry of Power has now been dissolved and its functions transferred to the Minister of Technology. The Ministry of Technology Order 1969 gives legal effect to this transfer of functions and came into operation on 23rd October 1969.

As a result, the enlarged Ministry of Technology would now seem, so far as nuclear energy is concerned, to be responsible generally for both the public and private sectors of the nuclear industry. The United Kingdom Atomic Energy Authority, the Central Electricity Generating Board (with the Regional Electricity Boards) and the licensing and inspection of nuclear installations will all be co-ordinated under one Minister in future.

THIRD PARTY LIABILITY

Nuclear Installations Act 1969

The purposes of this Act were explained and a commentary given on its provisions, while it was still a Bill, in the Nuclear Law Bulletin No.3. This Act came into force on 16th May 1969.

RADIATION PROTECTION

The Ionising^(*) Radiations (Sealed Sources) Regulations No. 808, 1969

These Regulations which were made by the Minister of Labour on 12th June 1969, by virtue of the powers conferred on her under the Factories Act 1961, were briefly commented on when they were in the form of a draft in the Nuclear Law Bulletin No. 3. Their general purpose is to bring the protection of workers exposed to ionizing radiations arising from sealed sources into line with the Regulations relating to unsealed radioactive substances.^(**)

(*) Also spelt "ionizing".

(**) The Ionising Radiations (Unsealed Radioactive Substances) Regulations No.780, 1968 (see the Nuclear Law Bulletin No. 3).

These Regulations are divided into ten Parts and include a Schedule.

1. Part I is devoted to interpretation and general provisions, defining a number of terms used in the Regulations, limiting their scope and providing for exemption from the requirements granted by the Chief Inspector of Factories.
2. Part II deals with administration, notifications and records. The occupier of a factory or other premises to which the Regulations apply must give one month's notice to the Inspector of Factories before undertaking work relating to sealed sources. Accidents such as loss or leakage must be notified to the Inspector. A competent person must be appointed to exercise supervision with regard to the observance of the Regulations.
3. Part III comprises the basic principles for protection of workers against exposure to ionizing radiations. All sources of ionizing radiations must be adequately shielded where reasonably practicable and steps taken to limit radiation. Workers must receive instructions in the hazards involved and the precautions to be taken. The Chief Inspector is given important powers to ensure protection and may require the operator to make arrangements for the wearing of dosimeters by workers and the recording of doses of radiation. Medical examinations may also be required.
4. Part IV concerns radiological supervision. A person employed in a radiation area is considered a classified worker and must comply with the requirements relating to such workers. A person whose work is not likely to involve more than a small dose of radiation is not considered as a classified worker. No person under 18 can be employed on work which would require him to be designated as a classified worker. There are provisions for the wearing of film badges and the use of dosimeters during any period in which the worker is liable to exposure to radiation and for the keeping of records of the dose received. Certain procedures are laid down for the case where a worker has received a radiation dose in excess of the maximum permissible. There are provisions for the transfer of a worker's radiation records when he leaves his employment whether he goes to another employer to do work involving radiation or not.
5. Arrangements for medical supervision are contained in Part V. Such supervision is compulsory and the occupier must make available the services of a doctor and provide him with the necessary equipment to carry out his work. A classified worker must undergo a medical examination before employment as such and thereafter submit to periodic or special examinations when he has received a radiation dose greater than permitted. Medical examinations may include a blood examination and must take place at least once in every calendar year. The appointed doctor is empowered to suspend any worker from employment in a radiation area. A health register has to be kept containing particulars of all examinations.
6. In Part VI there are provisions concerning the organisation of work. These include the marking of radiation areas, the posting of warning notices and prohibitions concerning the handling, construction and maintenance of sealed sources. Tests for leakage have to be made periodically and procedures are laid down to be followed in the case of leakage or breakage. Records of sealed sources have to be preserved and if a sealed source is lost or mislaid the Inspector of Factories must be notified. Suitable stores have to be provided for storage of sealed sources when not in use, and transport within a factory has to be carried out in suitable containers and subject to certain safeguards.

7. Part VII deals with the provision, maintenance and use of monitoring instruments.

8. Part VIII lays down special precautions to be observed in the case of radiography and other similar processes including the irradiation of materials or food. Special enclosures or cabinets to provide adequate shielding must be used or if not reasonably practicable other suitable measures have to be taken to avoid exposure. There must be a system of warning signals by which the operation of sealed sources is controlled.

9. In Part IX requirements are laid down for the shielding of X-ray crystallographic and spectrometric apparatus.

10. The tenth and final Part deals with measuring and detecting devices and static eliminators, and lays down shielding and warning requirements.

11. The Schedule to the Regulations specifies the maximum permissible radiation doses to which workers may be exposed. Classified workers may not receive in any calendar year more than 75 rems to the hands, forearms, feet and ankles, 15 rems to the lens of the eye or 30 rems to other parts of the body. For other workers the limits for any calendar year are 3 rems for males or 1.3 rems for females (or in the case of a pregnant female 1 rem from the time her pregnancy is known and for the rest of that period).

12. These new Regulations on protection against ionizing radiations from sealed sources came into force on 13th July 1969 except for Regulations 32, 46 and 47 which come into force on 13th December 1969. They supersede the Ionising Radiations (Sealed Sources) Regulations No.1470, 1961, which are revoked.

Certificates of Approval Nos. 1 and 5 under the Ionising Radiations (Unsealed Radioactive Substances) Regulations No.780 of 1968

Under these Regulations (which were referred to in the Nuclear Law Bulletin No. 3) the Chief Inspector of Factories has wide powers to grant exemptions and to ensure the protection of workers. Under Regulation 21(1) he has now approved (Certificate of Approval No. 1), for the purposes of measuring doses of radiation to the eyes, hands, forearms, feet and ankles, any radiation dosimeter based on the phenomenon of radiation-induced thermoluminescence and supplied by an approved laboratory. Also under Regulation 21(2) he has approved (Certificate of Approval No.5) certain formal particulars which have to be included in the certificates, given by a laboratory responsible for the examination of film and dosimeters, specifying the doses of radiation indicated by the film or dosimeters submitted to it.

Radiological Protection Bill

A Bill has recently been presented to Parliament to establish a National Radiological Protection Board. The functions of this Board will be to advance the acquisition of knowledge about the protection of mankind from radiation hazards by means of research and otherwise and to provide information and advice to persons, including Government departments, who have responsibilities in relation to the protection from radiation hazards either of the community as a whole or of particular sections of the community. The Board will have power to provide technical services and to make charges for them. The Board will take over the Radiological

Protection Service (at present administered by the Medical Research Council) and the Radiological Protection Division of the UKAEA's Health and Safety Branch. It will also replace the Radioactive Substances Advisory Committee appointed under the Radioactive Substances Act 1948. The Board will be subject to directions given by the Health Ministers, i.e. the Secretary of State for Social Services and the Ministers responsible for health in Scotland, Wales and Northern Ireland. There are provisions for the Board's constitution, membership, proceedings and staff.

The Advisory Committee is also to be set up, whose Chairman will be the Chairman of the new Board ex officio and whose members will come from experts in radiation health and safety, to advise the Board on practical matters concerning radiation hazards and ways of dealing with them, and concerning the complying with international agreements and international standards.

● *United States*

REGIME OF NUCLEAR INSTALLATIONS

New Bills on Siting of Power Plants and Environmental Protection

According to an article in Nuclear Industry (the monthly magazine of the Atomic Industrial Forum of the United States) of August 1969, two Bills have been introduced in the United States Congress designed to deal in different ways with the conflict between on the one hand the urgent need in the United States for new power generating facilities and on the other hand the need to protect the environment.

These two legislative proposals, which cannot both become law because they provide differing solutions to the same problem, seek to resolve at a regional level the various issues concerning the siting of power plants and to provide mechanisms for co-ordinating the respective responsibilities of Federal, State and local agencies in respect of environmental protection.

Under one Bill (S.2752, which, if enacted, would be known as the "Intergovernmental Co-ordination of Power Development and Environmental Protection Act") regional boards would certify that utilities proposing to construct new power generating plants had complied with a variety of power supply reliability and environmental standards. On the basis of this certification a construction licence would then be granted by a Federal agency to be designated by the President.

The other Bill (H.R.12585, which, if enacted, would be known as the "Electric Power Co-ordination Act of 1969") would rather similarly provide for a regional certification process but no additional Federal licence would be required as such. The utility would merely submit to the Federal Power Commission (FPC) various certifications that its proposed facility complies with specified requirements before construction could start. Construction plans would have to be publicly disclosed two years in advance and if at the end of this period the necessary clearances have still not been obtained so as to enable the proposer to certify to the FPC that all the appropriate standards had been or would be complied with,

the FPC would be able to intervene and authorize construction to proceed nevertheless. Neither Bill appears to intend setting up a completely new regime in place of that set forth in the United States Atomic Energy Act for control of radiological health and safety. Both Bills appear to impose environmental requirements in addition to those set out in the United States Atomic Energy Act.

The purpose of both Bills being broadly the same, it remains to be seen which of the procedures envisaged by the Bills will be favoured by Congress, when they come up for consideration by the respective committees to which they have been referred, or whether neither of these solutions proposed will be acceptable.

REGIME OF NUCLEAR INSTALLATIONS

Amendments to the System for Licensing Nuclear Installations

The AEC has established an Atomic Safety and Licensing Appeal Board which will review initial decisions in certain licensing proceedings. The Board will review all proceedings involving facilities in which the AEC has a direct financial interest and a number of other proceedings sufficient to give the Commission an opportunity to evaluate the new review procedure. By this delegation of its review function, the Commission expects to be enabled to devote more of its time and energies to major matters of policy and planning.

The AEC has announced its intention to initiate a public rule-making proceeding by June 1970 to consider whether a finding of practical value, within the meaning of Section 103 of the Atomic Energy Act, should be made for certain types of light water power reactors. The Act provides that whenever the AEC makes a finding that a type of reactor has been sufficiently developed to be of practical value for industrial or commercial purposes, the AEC may thereafter issue licences for facilities of that type under Section 103 of the Act. Thus far licences have been issued under Section 104(b) which authorized licensing of facilities involved in conduct of research and development leading to the demonstration of practical value.

In 1965 and 1966 the AEC considered whether a finding of practical value should be made and concluded that it could not be made on the basis of the limited information available relating to the operation of the prototype and non-competitive power reactors then in operation. The AEC now anticipates that before mid-1970 sufficient information on certain types of larger light water reactors will be available to form a basis for a rule-making proceeding to determine whether such reactors are of practical value.

Among the legal consequences of such a finding are (1) only Section 103 licences would thereafter be issued; (2) proposed issuance of a licence must be reported to the Attorney General for an advisory opinion on anti-trust aspects; (3) preference must be given to applications for reactors located in high cost areas.

These statutory provisions were originally based on anticipation of scarcity of nuclear materials and desire to establish the point at which a facility type should not be eligible for further Governmental assistance. These considerations are now less important because materials are plentiful and control over assistance is exercised through the budgetary process. The AEC supports legislative proposals pending in Congress which would eliminate the practical value distinction between Section 103 and 104(b) licensing.

The AEC has published for comment proposed amendments to its reactor licensing regulations which amendments provide additional criteria for quality assurance programmes in construction and operation of nuclear power plants. The term "quality assurance" comprises all those planned and systematic actions necessary to provide adequate confidence that a structure, system, or component will perform satisfactorily. It includes quality control, which consists of those quality assurance actions related to the physical characteristics of material, structure, component, or system which provide a means to control the quality of the material, structure, component, or system to predetermined requirements.

Comments have also been solicited on a proposed policy concerning the siting of commercial fuel reprocessing plants and the disposal of high-level radioactive liquid wastes generated at these plants. These plants recover valuable unused nuclear fuel from fuel elements removed from reactors. These elements also contain radioactive fission products which emerge from reprocessing as liquid or solid wastes. The proposed policy declares that public health and safety considerations do not require that the plants and facilities for temporary storage of high-level wastes be located on land owned and controlled by the Federal Government; they may be located on privately owned property. High-level wastes must be converted to an AEC-approved solid form and shipped as soon as practicable to a Federal waste repository. Industry will pay the Federal Government a fee designed to cover all costs of disposal and perpetual surveillance. The AEC plans to develop and publish standards which will identify the solid form or forms considered to be acceptable for transfer to the Federal repository. A principal requirements is a solid form which gives reasonable assurance that no significant release of radioactivity to the environment can occur in the event of an accident during shipment.

The AEC proposes to establish additional safeguards requirements regarding physical protection of special nuclear material in use or storage. The new requirements would apply to licensees possessing more than 5,000 grams of U-235 contained in uranium enriched to 20 per cent or more, U-233, or Pu, or any combination of these. These quantities could be used only in a protected area under surveillance of an authorized individual and stored in a locked security container or building to provide additional assurance that the material will be safeguarded against theft and unlawful diversion.

CASE LAW AND ADMINISTRATIVE DECISIONS

CASE LAW

• *United States*

OPPOSITION TO DELIVERY OF A CONSTRUCTION PERMIT FOR A REACTOR

In a recent proceeding seeking construction permits for two pressurized water reactors to be located on the Chesapeake Bay in Maryland, an intervenor opposed issuance of the permits because of possible genetic and long-term effects of radioactivity in reactor effluent although the levels would be well within limits specified in AEC regulations. The Atomic Safety and Licensing Board ordered issuance of the permits. However, the decision indicated that there might be cases in which the validity of AEC regulations could be challenged. This was not such a case and the Board found itself governed by Part 20 (Standards for Protection Against Radiation). The Atomic Energy Commission issued a memorandum directed to this point. The Commission stated that AEC licensing regulations "are not subject to amendment by boards in individual adjudicatory proceedings". However, it acknowledged that the validity of a regulation related to an issue in the proceeding can be challenged on limited grounds, i.e. "whether the regulation was within the Commission's authority; whether it was promulgated in accordance with applicable procedural requirements; and, respects the Commission's radiological safety standards, whether the standards established are a reasonable exercise of the broad discretion given to the Commission by the Atomic Energy Act for implementation of the statute's radiological safety objectives". The Commission suggested that any substantial question presented as to a regulation's validity should be certified to the Commission.

The Northern States Power Company has filed suit in Federal court to determine whether the Federal Government has exclusive jurisdiction over nuclear power plants and their radioactive discharge or whether the State of Minnesota has jurisdiction as well. The suit arises from the fact the state has imposed on Northern States Power Company radioactive discharge regulations which are more stringent than the AEC's requirements. The AEC takes the position that its jurisdiction is exclusive.

ADMINISTRATIVE DECISIONS

• *Belgium*

THIRD PARTY LIABILITY

Recognition of the European Atomic Energy Community as a nuclear operator

Under the Royal Decree of 30th July 1969 the European Atomic Energy Community (Euratom) was recognized as a nuclear operator within the meaning of the Paris Convention, in respect of the Central Office for Nuclear Measurements at Geel (Belgium). The same Decree set the maximum amount of Euratom's liability at B.Frs.250 million for each incident, pursuant to the power conferred on the Belgian Government by Section 6 of the Belgian Act of 18th July 1966 on third party liability in the field of nuclear energy, to set an amount differing from the maximum limit of B.Frs.500 million normally prescribed by the Act. These decisions were notified to the Commission on 22nd August 1969 and thereupon came into force.

INTERNATIONAL ORGANISATIONS AND AGREEMENTS

INTERNATIONAL ORGANISATIONS

• *International Atomic Energy Agency*

REVIEW OF ARTICLE VI OF IAEA STATUTE

The Ad Hoc Committee of the Board of Governors met on 15th-17th April and 3rd-4th June 1969 to study the matter. Memoranda were submitted by Belgium, the Democratic Republic of the Congo, Italy, Mexico, Pakistan and the United Arab Republic, putting forward suggestions for possible amendments to Article VI of the Agency's Statute. Following a further meeting of its Ad Hoc Committee on 19th September 1969, the Board informed the XIIIth General Conference of its intention to continue the study of this question as an urgent matter with a view to proposing an amendment to Article VI as soon as it was able to do so. By Resolution GC(XIII)/RES/261, the General Conference requested the Board to make every effort to present a draft amendment in sufficient time to permit its consideration at the XIVth regular session of the Conference in September 1970.

SUPPLY OF NUCLEAR EQUIPMENT AND MATERIALS FOR REACTOR PROJECTS

The Board of Governors approved in June 1969 a draft agreement providing for the transfer by the Federal Republic of Germany to Argentina, free of charge, of a Siemens SUR-100 Zero-power training reactor and the necessary fuel material. The supply of this reactor has been requested by the Argentine National Atomic Energy Commission for a training project to be set up at the University of Rosario.

At its series of meetings in September 1969, the Board further approved the Agency's assistance in securing enriched uranium from the United States for:

- (a) the establishment of a research reactor project at the National Nuclear Centre under construction near Santiago in Chile; and

- (b) the continued operation of a research reactor project at the Bandung Reactor Centre in Indonesia.

The Board also approved a Five-Year Supply Agreement to be concluded between the Agency, Finland and the United States to meet the fuel requirements of Finland for the continued operation of a training and research reactor at the Institute of Technology at Otaniemi in Finland. This was the first Agreement for the supply of enriched uranium through the Agency over a five-year period and such transaction may be found desirable by Member States in future requests for the supply of fuel for nuclear reactors.

SAFEGUARDS AGREEMENTS

By 30th September 1969 the Board of Governors has approved a total of 43 safeguards agreements (including project agreements containing safeguards provisions) involving 31 States.

Safeguards Transfer Agreements were concluded between the Agency and the following countries on the dates indicated below:

Argentina/United States - 13th June 1969
(INFCIRC/130 and Corr.1/Rev.1)

Austria/United States - 20th July 1969

Pakistan/Canada - 17th October 1969
(INFCIRC/135)

Portugal/United States - 11th July 1969
(INFCIRC/131)

In addition, the Agreement for the Application of Safeguards to the Taiwan Research Reactor Facility (INFCIRC/133) was concluded on 13th October 1969 between the Agency and the Republic of China.

The Treaty for the Prohibition of Nuclear Weapons in Latin America (Tlatelolco Treaty) has entered into force between 14 Latin American States. Mexico was the first country to conclude on 6th September 1968 a safeguards agreement with the IAEA (INFCIRC/118) covering all its nuclear activities.

CO-OPERATION AGREEMENTS

The Board of Governors also authorized the Director General in September 1969:

- (a) to take the necessary steps for the conclusion of an agreement with the League of Arab States on the lines of the Agency's co-operation agreement concluded on 26th March 1969 with the Organisation of African Unity (INFCIRC/25/Add.2); and
- (b) to conclude with the Government of Sweden an agreement for co-operation in the provision of assistance to developing countries.

The IAEA/Sweden agreement will be similar to those concluded by FAO with Sweden and Denmark on 14th January 1969 and 31st January 1969 respectively. The Swedish Government, through the Swedish International Development Authority (SIDA), would make available to the IAEA each year, as funds in trust, such sums as the Agency would require to expend in the succeeding year to implement agreed projects of assistance in developing countries. Such projects would be carried out under the Agency's supervision and control, in accordance with its established practice and policy.

PANEL AND STUDY GROUP MEETINGS

A panel of experts was convened in Vienna from 24th to 28th November 1969 to study problems of nuclear insurance in Member States which are in the early stages of nuclear development. The scope of the meeting was limited to insurance problems concerning land-based nuclear installations and the panel was mainly concerned with third party liability of the operators and questions of property insurance. The panel was composed of experts from 8 Member States (Argentina, Brazil, Finland, India, Korea, Mexico, Philippines and Rumania), assisted by a participant from Australia, the Chairman of the Standing Committee on Civil Liability for Nuclear Damage established under the Vienna Convention, and representatives of the European Insurance Committee and insurance associations in the Federal Republic of Germany, the United Kingdom and the United States. Observers from Rumania and the United Arab Republic also attended the panel meeting. The report of the panel was to be circulated to Member States for comments or to serve as guidance as they deem appropriate.

In collaboration with WHO, the Agency organised from 1st to 5th December 1969 in Vienna an inter-regional study group meeting on radiation protection legislation. The purpose of the meeting was to bring together legal and technical experts to consider various approaches to regulatory measures for radiation protection and practical problems encountered in drafting or implementing legislation in this field, with special regard to the needs of developing countries. Guidelines for the framing of appropriate legislation were also to be drawn up by the study group for use in the provision of advisory services to developing countries upon request. The meeting was attended by invited experts from France, the Federal Republic of Germany, India and Norway, participants from Argentina, Brazil, Mexico, Turkey, the United Arab Republic, Viet-Nam and Yugoslavia, observers from Australia, Canada, France and the Netherlands, and representatives of international organisations (ENEA, EURATOM, WHO).

ASSISTANCE, TRAINING AND PUBLICATION

As a result of the Agency's assistance in the framing of nuclear legislation, a basic law on atomic energy was enacted by Costa Rica on 23rd August 1969. Further advice was requested from the Agency for the elaboration of specific regulations called for under that basic law. Following the enactment by Ceylon of the Atomic Energy Act No.19 on 25th June 1969, the Authority set up under this Act also requested the Agency's advice in the drafting of safety regulations for radioactive substances. Such advisory services are being provided to the Philippine Atomic Energy Commission regarding draft regulations and rules for the licensing of nuclear installations and materials.

In the second half of 1969, training in nuclear law at the Agency's Headquarters was provided to three lawyers from Afghanistan, the Federal Republic of Germany, and Indonesia.

A new publication in the Agency's Legal Series was issued in September 1969, under the title: "Nuclear Law for a Developing World" (Legal Series No.5, 329 pages). It contains the texts of more than 30 lectures given at the first international course for training lawyers and administrators associated with the development and management of national programmes on nuclear energy, organised by the Agency's Legal Division in April 1968 in Vienna. This is the first publication to cover the main legal issues raised by the peaceful uses of atomic energy. Its contents are divided into the following chapters:

- International Organisations;
- Basic Legislation on Atomic Energy;
- Third Party Liability and Insurance;
- Reactor Licensing and Supply of Nuclear Materials;
- Safety Regulations;
- Technical Assistance, Food Irradiation, Nuclear Power and Training in Nuclear Law;
- Safeguards.

● *European Nuclear Energy Agency*

THIRD PARTY LIABILITY

Following the Monaco Symposium organised in October 1968, studies were undertaken with a view to improve the legal system and insurance conditions for the maritime carriage of nuclear substances. These studies were pursued in active co-operation with the other organisations concerned, namely, the IAEA, the Intergovernmental Maritime Consultative Organisation (IMCO), Euratom and the International Maritime Committee. At its meeting in July 1969 the ENEA Group of Governmental Experts on Third Party Liability came to an agreement on one of the main problems arising in this field, that is: damage to the means of transport.

Article 7(c) of the Paris Convention provides the possibility of including damage to the means of transport within the liability of the operator, on condition that such an inclusion in no way reduces the liability of the operator in respect of other damage to an amount inferior to 5 million EMA u/a, thus ensuring that the claims of other victims of a nuclear incident are met on the basis of this minimum amount.

After study of this question, the Group of Experts decided to request the Steering Committee for Nuclear Energy to recommend to the Signatories of the Paris Convention that they take advantage of the option provided by Article 7(c). At its meeting on 9th October 1969, the

Steering Committee approved the conclusions of the Group of Experts, and consequently recommended that steps should be taken, in accordance with the Paris Convention, to make the nuclear operator liable for damage to the means of transport. The text of the Recommendation of the Steering Committee is reproduced here below:

"The Committee recommended that, with a view to achieving harmonization in the application of the provisions of the Paris Convention, Signatory countries who had not already done so should provide in their legislation for rules in conformity with Article 7(c) of the Paris Convention so that the exception in Article 3(a)(ii)(2) should not apply, with the result that damage to the means of transport upon which the nuclear substances involved were at the time of the nuclear incident would be included within the liability of the nuclear operator, provided that at least 5 million EMA u/a were available to meet other claims for damage." (See also in the Chapter "Miscellaneous" the Note concerning problems relating to the inclusion of damage to the means of transport).

RADIATION PROTECTION

Guide to the Safe Design, Construction and Use of Radioisotopic Power Generators for Certain Land and Sea Applications

A Joint Working Group of the International Atomic Energy Agency (IAEA) and the European Nuclear Energy Agency (ENEA) has just finalized a Guide to the safe design, construction and use of radioisotopic power generators for certain land and sea applications.

Most radioisotopic power generators use relatively large amounts of radioactive materials as their source of energy, and in such quantities as to be potentially very hazardous. It is therefore essential that adequate safety standards be prepared and met, so as to ensure that the exposure of individuals and the population at large, under normal operating and accident conditions, will be as far below the internationally accepted dose limits(*), (***) as can be readily achievable.

Since these generators are power units which may be used in industries and public services by people not necessarily skilled in working with radioactive materials, it follows that, to the highest practicable degree, they must possess inherent safety features.

Isotopic power generators may be sited in situations where particular problems of radiation safety control arise and where they may be exposed to severe environmental conditions or to accidents. In addition, they will, in the majority of cases, have to be recovered and disposed of at the end of their useful lives.

The Guide is intended to facilitate the establishment of an adequate standard of safety in the design, construction, installation and use of radioisotopic power generators, and in their ultimate disposal. The immediate requirement is considered to be in relation to these generators which are in an advanced state of development and production

(*) Basic Safety Standards for Radiation Protection. Safety Series No.9, IAEA. Vienna, 1967.

(***) Radiation Protection Norms, ENEA, Paris, 1968.

and which are designed for use on land and on or under the sea. The Guide deals mainly with radioisotopic power generators in the power range from about one hundred milliwatts to some hundred watts. However, competent national authorities may adapt these guidelines to generators outside this power range. It has been decided at this stage to exclude consideration of miniature generators for medical use, in watches and in other devices available to the general public. Generators for use in space have also been excluded.

Plans are underway to publish this Guide, which was already approved in October 1969 by the ENEA Steering Committee, as a joint IAEA/ENEA publication in the Safety Series of the International Atomic Energy Agency.

AGREEMENTS

• *Germany - Netherlands*

NUCLEAR-POWERED SHIPS

The Treaty^(*) of 28th October 1968 between the Federal Republic of Germany and the Kingdom of the Netherlands on the use of Netherlands' territorial waters and ports by the German nuclear-powered ship "Otto Hahn", was approved by an Act of Parliament dated 4th June 1969 /BGBL II, page 1121/.

• *Germany*

OECD RADIATION PROTECTION NORMS

Pursuant to the OECD Council Decision of 19th July 1966 concerning the adoption of radiation protection standards for radioluminous timepieces, a Federal Law was passed on 22nd July 1969 /BGBL II, page 1309/.

CERN

The amendments to the Convention for the Establishment of a European Organisation for Nuclear Research (CERN) as proposed by a Decision of the Organisation's Council of 14th December 1967, were approved by an Act of Parliament dated 25th June 1969 /BGBL II, page 1197/.

EUROPEAN AGREEMENT CONCERNING THE INTERNATIONAL CARRIAGE OF DANGEROUS GOODS BY ROAD (ADR)

This Agreement of 30th September 1957 on transport of dangerous goods by road (with its Annexes A and B) was approved by an Act of Parliament of 18th August 1969 /BGBL II, page 1489/.

(*) See Nuclear Law Bulletin No. 3, page 50, April 1969.

● *European Nuclear Energy Agency*

AGREEMENT FOR THE FURTHER EXTENSION OF THE REVISED AGREEMENT CONCERNING THE HIGH TEMPERATURE GAS-COOLED REACTOR PROJECT (DRAGON)

The Dragon Project was set up in April 1959 under an Agreement concluded between the United Kingdom Atomic Energy Authority, the Austrian and Swiss Governments, the national atomic energy authorities of Denmark, Norway and Sweden, and the Euratom Commission (representing Belgium, France, Germany, Italy, Luxembourg and the Netherlands). A new Agreement signed in 1962 extended the activities of the Project until 31st March 1967 with an increase in the overall budget from £13.6 million to £25 million. Agreements for the further extension of the Project's activities were signed in 1966 and 1968, bringing the total overall budget up to £31 million for the period to 31st March 1970. (See Nuclear Law Bulletin No. 2 of November 1968).

In July 1969 agreement in principle was reached for a further extension for three years up to 31st March 1973 and on 25th November this Agreement was signed in Copenhagen by representatives of the Signatories to the preceding Agreements.

The Agreement comes into force on 1st April 1970 and most of the provisions of the 1966 Dragon Agreement will remain unchanged. The Signatories will consult together regarding a further extension of the joint programme to determine whether the Dragon Agreement should be extended beyond 31st March 1973. It is agreed that the question of further extension will be determined not later than 30th September 1972.

For the duration of the new Agreement, expenditure relating to the carrying out of the Dragon Project will amount to a sum fixed at £6.935 million, thus increasing the overall budget of the Project, contributed by the Signatories, to £37.935 million.

AGREEMENT ON THE OECD HALDEN REACTOR PROJECT COVERING THE PERIOD 1ST JANUARY 1970 TO 31ST DECEMBER 1972

The Halden Project was set up in July 1958 under an Agreement between the Norwegian Institutt for Atomenergi (who had constructed a boiling heavy water reactor at Halden in Norway), the Austrian and Swiss Governments, the national atomic energy authorities of Denmark, Sweden and the United Kingdom, and the Euratom Commission, for a joint programme of research and experiments with the Halden reactor. Various further Agreements were signed in 1960, 1962, 1964 and 1966 extending the Agreement until 31st December 1969. Over the years the various participants have changed from time to time with some dropping out and other countries joining in.

During 1969 agreement has been reached between the national atomic energy authorities of Austria, Denmark, Finland, Italy, Japan, the Netherlands, Norway and Sweden and a German group of five industrial and research bodies, concerning a further three-year period for the operation of the Halden Project from 1st January 1970 to 31st December 1972. The total budget for this three-year period has been agreed at a figure of 5.150 million EMA u/a. The joint programme for the next three years will cover research and development in the field of high fuel heat rating, in-core instrumentation, thorium fuel studies, fuel element testing and reactor on-line digital computer control. This Agreement has already been signed by most of the participants and it is expected that all will have signed in December 1969 so that the Agreement will come into force on 1st January 1970 as envisaged.

MISCELLANEOUS

THIRD PARTY LIABILITY

Inclusion of Damage to the Means of Transport

In connection with the recent Recommendation of the Steering Committee of ENEA /The text of which is given on page 24 of this Bulletin/ that Signatory countries to the Paris Convention should make provision in their legislation for the inclusion, within the liability of their operators, of damage to the means of transport upon which the nuclear substances involved are being carried at the time of the nuclear incident, it may be of interest to recall that up to the present time only three countries(*) of the six which have ratified the Paris Convention have made specific provision in their law to this effect. (**)

In the remaining thirteen Signatory countries the present position, so far as the inclusion or exclusion of damage to the means of transport is concerned, may perhaps be analysed as follows:

(i) there are some countries (***) which have at present no special nuclear third party liability law;

(ii) there are some countries (****) which have had for some time a nuclear third party law (or a law relating to nuclear installations which includes provisions for third party liability) but which either have not yet ratified the Paris Convention or given effect fully to its provisions, or have not exercised the various options such as inclusion of damage to the means of transport. Their nuclear law does not at present contain any special stipulations concerning damage to the means of transport, although it is understood that several of these countries have indicated that they intend to do so in due course or are already in the course of doing so (see footnote (**) below);

(iii) there are some countries (*****) whose laws at present exclude either expressly or by necessary implication damage to the means of transport.

(*) France, Sweden and the United Kingdom.

(**) It is understood that four other countries (Belgium, Denmark, Switzerland and Norway) are including similar provisions in draft laws which are in various stages of preparation and which are expected to be enacted within the fairly near future.

(***) Greece, Luxembourg, Norway, Portugal, and Turkey.

(****) Austria, Belgium, Denmark, Germany, Italy and Switzerland.

(*****) Netherlands and Spain.

Whether or not damage to the means of transport would be within the legal responsibility of an operator of a nuclear installation in those countries which have not specifically provided for this (i.e. cases (i) and (ii) above) would seem to depend either on the general common law rules applicable in that country or on the terms of any contract between the operator and the carrier relating to damage to the means of transport.

It could perhaps be argued that from now on, in those countries which have no specific provision about damage to the means of transport but who have a nuclear law making an operator absolutely liable for damage caused by nuclear substances coming from his installation, that operator may be held liable for damage to the means of transport if such damage has not been expressly excluded.

It may thus be said that at present the legal position so far as liability for damage to the means of transport is concerned is at least not at all clear or consistent except in those countries which have taken advantage of the option to include it given by Article 7(c) of the Convention. For the reasons mentioned by the Steering Committee when making their Recommendation, it would be obviously desirable for the sake of greater certainty and uniformity if all the Signatories were, as soon as possible, to include damage to the means of transport expressly within the liability of operators provided that at least 5 million EMA u/a are left available for other damage.

NUCLEAR LAW BULLETIN NO.2

Corrections to the Swedish Nuclear Liability Act

The Nuclear Liability Act of 8th March 1968 was published as a Supplement to the Nuclear Law Bulletin No. 2. The English translation of this Act was prepared by the Swedish Ministry of Justice with the assistance of the ENEA Secretariat.

Since publication of Bulletin No. 2, the Swedish Authorities have sent the following corrections:

- (1) In Section 6(b), first line, insert the word "such" before "carriage".
- (2) In Section 15(b), substitute "the receiving installation" for "that installation" on the third line from the bottom.
- (3) In Section 23(a), delete the word "maximum" on the third line from the bottom.

ENEA ANALYTICAL STUDY ON NUCLEAR LEGISLATION

ERRATA IN THE VOLUME "ORGANISATION AND GENERAL REGIME GOVERNING NUCLEAR ACTIVITIES"

On page 114, the Chapter on Italy, the reference note at the top of the page should read as follows:

"Act No. 1860 of 31st December 1962".

On page 170, the Chapter on Spain, the reference note at the bottom of the page should read as follows:

"Decree No. 87 of 18th January 1968".

On page 238, the Note on Security Control, "Luxembourg", "Spain", and "Turkey" should be added to the list of countries which are enumerated in the footnote.

TEXTS

• *Switzerland*

ORDER OF THE FEDERAL DEPARTMENT OF THE INTERIOR ON RADIATION PROTECTION IN NUCLEAR RESEARCH INSTITUTES, OF 12TH SEPTEMBER 1969 (*)

The Federal Department of the Interior,

Having regard to Section 116 of the Order of 19th April 1963
on Radiation Protection,

Orders:

1. DEFINITIONS

Section 1

(1) For the purposes of this Order the following shall be deemed to be nuclear research institutes (hereinafter called "institutes"): all institutions (universities and centres of fundamental or applied research) in which nuclear research work is carried out with installations, equipment or substances capable of emitting ionizing radiations, with the exception of atomic installations within the meaning of Section 1(2) of the Federal Act of 23rd December 1959 on the peaceful uses of atomic energy and radiation protection.

(2) Installations used for accelerating charged particles (e.g. electrons, protons, deuterons) are hereinafter called "accelerators".

2. INSTALLATION AND PROTECTION

Section 2

Erection

(1) Accelerators and other large sources of radiations shall, as far as possible, be erected and installed as fixed installations.

(*) R.O. 1969-565 (Official Gazette)

(2) The premises in which a source of radiation within subsection (1) of this Section is installed and the premises in which the beam from the source is directed shall be deemed to be "irradiation premises" within the meaning of Appendix I, paragraph 26, of the Order of 19th April 1963 on radiation protection (hereinafter called OPR), to which the provisions of Section 58 OPR shall apply by analogy.

Section 3

Protective devices

- (1) Fixed installation radiation sources shall as far as possible be provided with fixed protective devices shielding them from places accessible to persons; failing this, protection must be provided by the structural parts of the premises where the irradiation takes place.
- (2) Mobile protective devices providing adequate protection for personnel during experiments must be available for each radiation source. For accelerators, special attention must be given to protection against neutrons.
- (3) The efficiency and proper working of fixed and mobile protective devices shall be periodically checked.

3. PERSONNEL

Section 4

Persons occupationally exposed to radiation

Persons attached to the institute who work regularly in controlled areas shall be "persons occupationally exposed to radiations within the meaning of Appendix I, paragraph 31, OPR, and shall be subject to the provisions of Sections 39 to 42 OPR.

4. RESPONSIBILITY

Section 5

Persons responsible

- (1) The person holding the authorization (Director of the Institute) shall be responsible for the observance of the provisions concerning radiation protection.
- (2) In each institute there shall be appointed an expert responsible for radiation protection within the meaning of paragraph 16 of Appendix I of OPR. In exceptional cases, the holder of the authorization may himself be so designated.
- (3) The expert must have the knowledge and experience required for following the progress of an experiment.
- (4) The expert shall be granted the necessary powers for the carrying out of his duties, by a written decision of the director of the institute.

(5) The expert shall at all times be entitled to put forward objections to the way a test is set up or to forbid the test, if reasons of protection so require.

Section 6

Special duties

(1) The expert shall be consulted in regard to the preparation and setting up of the equipment for any new experiment. He shall be provided for the purpose with all the data concerning the test.

(2) The expert shall, for each experiment, ascertain the radiation dose, its nature and distribution in places where persons may have access; he shall put his remarks down in writing, at least in the form of short notes or sketches.

(3) For tests involving a serious radiation hazard, the expert shall specify the places to which persons may have access and shall lay down in writing the maximum duration of work which may be effected while exposed to radiation hazards.

(4) The expert shall be responsible for the acquisition, maintenance, satisfactory working and efficient use of the monitoring devices referred to in Section 7.

5. MONITORING DEVICES

Section 7

Equipment

(1) Institutes must be equipped with an adequate number of monitoring devices suitable for radiation protection.

(2) The supply of monitoring devices under subsection (1) of this Section must at least be sufficient to measure the doses or dose rates of photons, electrons and neutrons of the energy involved, and where necessary also from charged heavy particles.

(3) For experiments under Section 6(3) personal dosimeters which can be read at all times must be worn.

Section 8

Coming into force

This Order shall come into force on 1st October 1969.

Bern, 12th September 1969

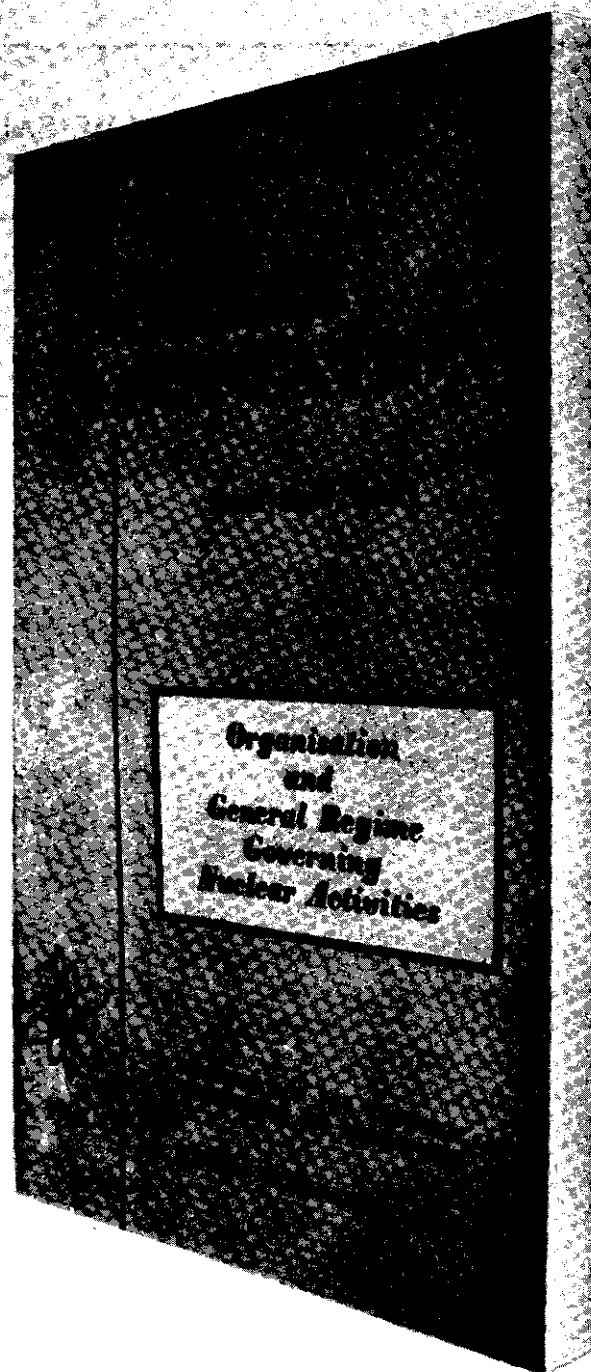
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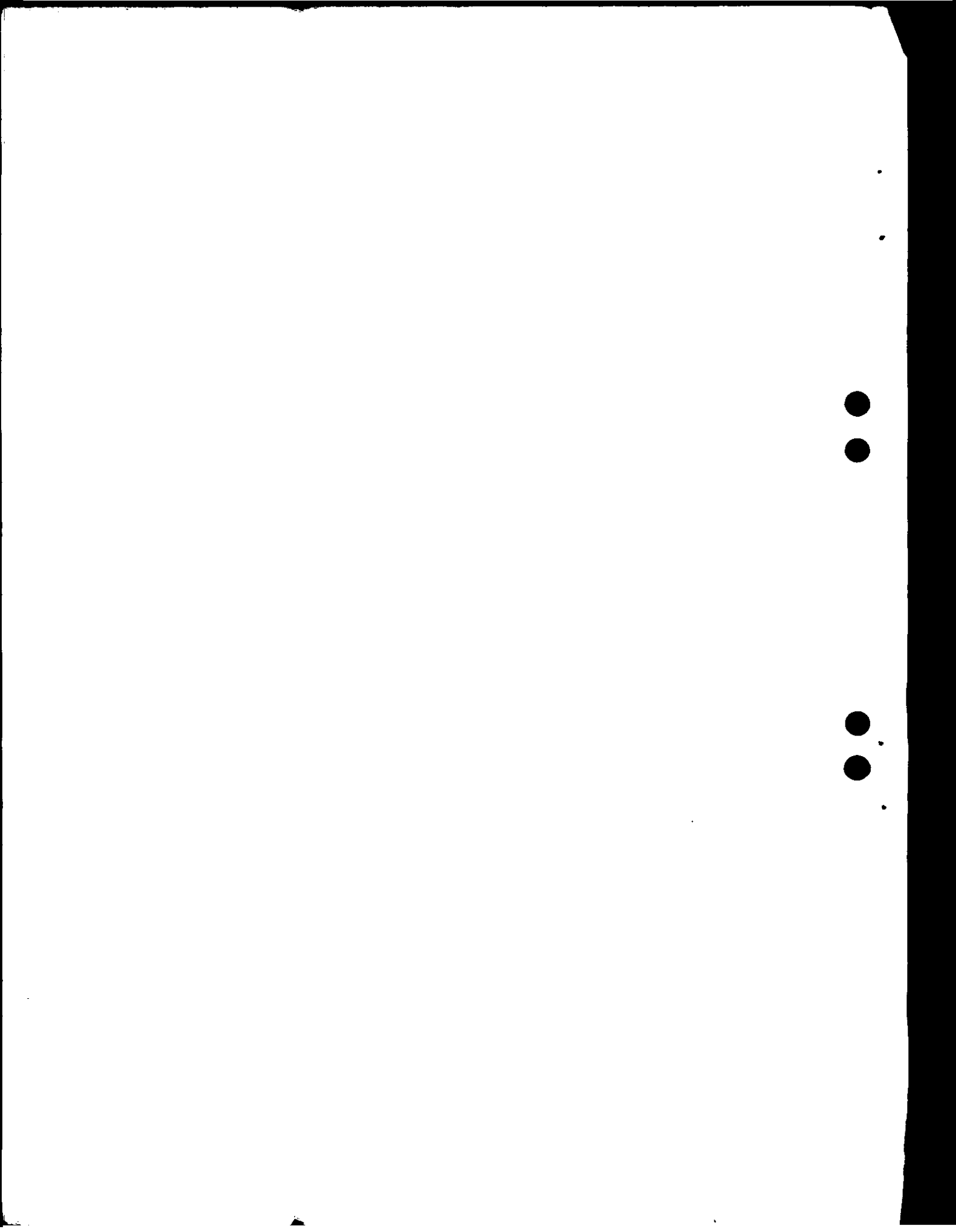
Bulletin

S U P P L E M E N T T O N ° 4

GERMANY

ACT ON THE PEACEFUL USES OF ATOMIC ENERGY
AND PROTECTION AGAINST ITS HAZARDS
OF 23RD DECEMBER 1959
(ATOMIC ENERGY ACT)

December 1969



G E R M A N Y

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

23rd December, 1959

(Bundesgesetzblatt 1959 I, p. 814)

The following Act has been enacted by the Bundestag, with the consent of the Bundesrat.

P A R T I

GENERAL

Section 1 - Purpose of the Act

It is the purpose of this Act -

1. to further nuclear research and development and the use of nuclear energy for peaceful purposes;

Note: This translation is taken, subject to some minor formal changes, from Volumes 4 and 10 of the Schriftenreihe des Bundesministeriums für wissenschaftliche Forschung (Gersbach & Sohn Verlag, Munich, 1961 and 1964). The translation of the amendments to the Act has been done by the Secretariat of the European Nuclear Energy Agency in liaison with the Institute of Public International Law at the University of Göttingen (Director: Professor G. Erler), with the agreement of the Bundesministerium für Bildung und Wissenschaft (Federal Ministry for Education and Science).

Asterisks at the end of a paragraph indicate that certain passages have been deleted, amended or added according to the Act given in reference. Passages which have been amended or added have dotted underlining.

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

Section 2 - Definitions

For the purposes of this Act

1. "special fissionable material (nuclear fuel)" means:
 - (a) plutonium-239;
 - (b) uranium-233;
 - (c) uranium enriched in the isotope 235 or 233;
 - (d) any substance containing one or several of the aforesaid substances;
 - (e) uranium and substances containing uranium of the natural isotopic mixture of such purity as to enable a continuous self-sustaining chain reaction to be maintained in a suitable installation (reactor).

The expression "uranium enriched in the isotope 235 or 233" means uranium containing isotopes 235 or 233, or both isotopes, in such quantity that the ratio between the sum of these two isotopes and isotope 238 is greater than the natural ratio between isotopes 235 and 238.

2. "source material" means:
 - (a) uranium containing the natural isotopic mixture, but not falling under paragraph 1;
 - (b) uranium containing less than the natural amount of uranium-235;
 - (c) thorium;
 - (d) any of the aforesaid substances in the form of metal, alloy, chemical compound or concentrate; and
 - (e) uranium and thorium ores.

P A R T I I

CONTROL

Section 3 - Import and Export

- (1) Any person who imports or exports nuclear fuel shall require a licence.

(2) An import licence shall be granted, provided:

1. that there are no known facts giving rise to any doubts as to the reliability of the importer; and
2. that it is assured that the nuclear fuel to be imported will be used in conformity with the provisions of this Act, the statutory ordinances made thereunder, and the international obligations of the Federal Republic in the field of nuclear energy.

(3) An export licence shall be granted, provided:

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

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

(5) Any other conveyance into or out of the area to which this Act applies shall be deemed to be import or export within the meaning of this Act.

Section 4. - Carriage of Nuclear Fuel

(1) ~~The carriage of nuclear fuel outside an enclosed area where nuclear fuel is kept in Government custody or outside an area where activities licensed under Sections 6, 7 and 9 are carried on, shall require a licence. Such licence shall be delivered to the consignor or the person responsible for ensuring the consignment or carriage of the nuclear fuel.~~(*)

(2) A licence shall be granted, provided:

1. that there are no known facts giving rise to any doubts as to the reliability of the applicant, of the carrier and of the persons actually ~~effecting the carriage~~ (*)(**);
2. that it is assured that the nuclear fuel will be carried in conformity with such legal provisions on the carriage of dangerous goods as are applicable to the particular carrier concerned or, in the absence of such provisions, that otherwise every precaution which is necessary in the light of existing scientific knowledge and technology has been taken in order to prevent damage resulting from the carriage of nuclear fuel;
3. that the necessary financial security has been provided to cover all legal liability to pay compensation for damage (sub-section (5) of Section 13);

(*) Section 1 of the Second Act of 28th August, 1969, to Amend and Supplement the Atomic Energy Act, [BGBl I, p. 1429]

(**) Section 1 of the First Act of 23rd April, 1963, to Amend and Supplement the Atomic Energy Act, [BGBl I, p. 201].

- (3) All authorities of the Bund, the Laender, and all local authorities and other regional authorities whose jurisdiction is involved shall take part in the licensing proceedings. Where any difference of opinion arises between the licensing authority and any Federal authority concerned, the licensing authority shall apply to the Federal Minister of Nuclear Energy and Water Economy (Bundesminister für Atomkernenergie und Wasserwirtschaft ^(*)) for instructions. In all other respects the licensing proceedings shall be governed by a statutory ordinance in accordance with the principles of Sections 17 to 19 and 49 of the Trading and Industrial Code (Gewerbeordnung).
- (4) Sub-sections (1) to (3) shall apply correspondingly to the non-stationary installations. However, the statutory ordinance as specified in the third sentence of sub-section (3) may provide that public announcement of the project and the availability for public inspection of the records may be dispensed with, and that if so objections shall not be examined orally (**).
- (5) Section 26 of the Trading and Industrial Code shall apply, as appropriate, if other premises are affected by a licensed installation.

Section 7(a) ^(***) Provisional Decision

- (1) Upon application, a provisional decision may be given in regard to certain matters on which the granting of a licence relating to an installation within the meaning of Section 7 depends, in particular in regard to the choice of site. Such provisional decision shall become null and void if the applicant fails to file an application for such licence within a period of two years from the date on which such provisional decision became effective and final. This period may on application be extended for two years.
- Sub-sections (3) and (4) of Section 7 and Sections 17 and 18 shall apply accordingly.

Section 7b ^(***) - Public Announcement: Objections by Third Parties

- (1) If the application procedure under Section 7 or Section 7a has been initiated, together with public announcement of the project and availability for public inspection of the records, an official copy of the decision given, including particulars of any right of complaint or objection, shall be made available for inspection for a period of two weeks; the date and the place of availability for inspection shall be announced in the same manner as the project. At the expiry of the period of such availability, the decision shall be considered as having been served on third parties who have not raised objections thereto; this shall be stated in the announcement.
- (2) In so far as in a partial licence or a provisional decision an application has been adjudicated upon in accordance with Section 7 or Section 7a and such decision has become effective and final, third parties shall be precluded in any subsequent proceedings from objecting to the licensing of the installation on the basis of facts already put forward or which such third parties might have put forward after the records had been made available for public inspection or the decision had been publicly announced.
- (*) now: Federal Minister for Education and Science (Bundesminister für Bildung und Wissenschaft)
- (**) Section 1 of the First Act of 23rd April, 1963, to Amend and Supplement the Atomic Energy Act [BGBL I, p. 201]
- (***) New Section introduced by Section 1 of the Second Act of 28th August, 1969, to Amend and Supplement the Atomic Energy Act [BGBL I, p. 1429]

Section 8 - Relation to the Trading and Industrial Code

- (1) The provisions of the Trading and Industrial Code regarding installations requiring a licence under Section 16 of the Trading and Industrial Code, and concerning prohibition of further operation of such installations, shall not apply to installations for which a licence is required under Section 7.
- (2) In particular cases, where installations subject to supervision under Section 24 of the Trading and Industrial Code are used in any installation requiring a licence under Section 7, the licensing authority may grant exemption from the requirements of Section 24 of the Trading and Industrial Code, if such exemption is granted with a view to the special technical character of the installation under Section 7.

Section 9 - Treatment, Processing and Other Uses of Nuclear Fuel, other than in Installations Requiring a Licence

- (1) Any person who treats, processes or otherwise uses nuclear fuel other than in an installation of the kind specified in Section 7, shall require a licence. Furthermore, a licence shall be required by any person who applies a method of treating, processing or otherwise using nuclear fuel in a way materially different from that specified in the licence, or who materially alters the installation or its location as specified in the licence.
- (2) A licence may be granted only -
 1. where there are no known facts giving rise to any doubts as to the reliability of the applicant or of the persons responsible for the administration and control of the use of nuclear fuel, and where such persons responsible for administration and control possess the requisite expert knowledge therefor;
 2. where every precaution has been taken which is necessary in the light of existing scientific knowledge and technology to prevent damage resulting from the use of nuclear energy;
 3. where the necessary financial security has been provided to cover all legal liability to pay compensation for damage;
 4. where all necessary protection is provided against interference or other intervention by third persons.

Section 10 - Exemptions from Licensing Requirements

Exemptions from the provisions of Sections 3 to 7 and 9 may be granted by statutory ordinance, provided that only such quantities or kinds of nuclear fuel or certain protective measures or equipment are involved, which are not likely to cause damage due to a self-sustaining chain reaction or to the effects of ionizing radiation and as far as this is in conformity with the purposes as specified in paragraphs 3 and 4 of Section 1(x).

- (x) Section 1 of the First Act of 23rd April, 1963, to Amend and Supplement the Atomic Energy Act [BGBl I, p. 201]

Section 11 - Enabling Provisions (Licences, Notification, General Permits)

- (1) Save where special provision for nuclear fuel and installations within the meaning of Section 7 has been made under this Act, it may be laid down by statutory ordinance to enable the purposes specified in Section 1 to be achieved -
1. that prospecting for or handling of radioactive substances (extraction, production, storage, treatment, processing or any other use or disposal), transactions in radioactive substances (acquisition, or delivery to others) or the carriage, import or export of such substances shall require a licence or notification;
 2. that the erection or operation of an installation for the production of ionizing radiation shall require a licence or notification;
 3. that a general permit may be issued, after examination of the particular type of construction conducted by an authority to be specified in the statutory ordinance, for installations, apparatus and equipment containing radioactive substances or producing ionizing radiation, and such form of notification may be specified as must be given by the operators of the installation, apparatus and equipment;
 4. that radioactive substances shall not be used in certain ways, to the extent that such prohibition is required for the enforcement of decisions by international organizations of which the Federal Republic of Germany is a member. (x)
- (2) The statutory ordinance may make the granting of licences and general permits within the purposes of this Act subject to personal and objective requirements, and may regulate the procedure for such licences and general permits.

Section 12 - Enabling Provisions (Safety Measures)

- (1) To achieve the purposes specified in Section 1, the following may be laid down by statutory ordinance:
1. the precautionary and supervisory measures which must be taken for the protection of individuals and of the general public in regard to the handling of and transactions in nuclear fuel and other radioactive substances, in the erection, operation and possession of installations as specified in Section 7 and paragraph 2 of sub-section (1) of Section 11, in the handling of and transactions in installations, apparatus and equipment as specified in paragraph 3 of sub-section (1) of Section 11, and in the carriage of such substances, installations, apparatus and equipment;
 2. the precautions which must be taken in order to ensure that certain specified radiation doses and concentrations of radioactive substances in air and water are not exceeded;
- (x) Section 2 of the Act Regarding the Decision of the Council of the Organisation for Economic Co-operation and Development (OECD) dated 19th July 1966 on the adoption of Radiation Protection Standards for Radioluminous Timepieces of 22nd July, 1969 /BGBL II, p. 1309/.

3. that no person shall be employed in areas exposed to radiation hazards unless he produces a certificate issued by a specially authorized medical practitioner, and that if any objections be raised to such employment for reasons of health, the supervisory authority shall decide after consulting medical experts;
 4. that any persons who stay or have been staying in areas exposed to radiation hazards shall be under obligation to have the radiation doses at their bodies measured (the extent of such obligation being specified in the statutory ordinance), to undergo medical examination and, in so far as the protection of other individuals or the general public so requires, to undergo medical treatment, such examination or treatment being given by specially authorized medical practitioners;
 5. that records shall be kept and reports submitted (in such manner as shall be specified in the statutory ordinance) on the production, extraction, acquisition, possession, delivery and any other disposal of source material, nuclear fuel and other radioactive substances, and on the measurement of doses and dose rates of ionizing radiation;
 6. that the supervisory authority shall be given report of any accident or other harmful occurrence during the handling of nuclear fuel or other radioactive substances, during the operation of an installation as specified in Section 7 and paragraph 2 of sub-section (1) of Section 11, during the handling of installations, apparatus and equipment as specified in paragraph 3 of sub-section (1) of Section 11, or during the carriage of such substances, installations, apparatus or equipment;
 7. that such radioactive substances as are no longer in use shall be stored, surrendered, disposed of or be secured by the appropriate authority (in such manner as shall be specified in the statutory ordinance);
 8. the manner in which nuclear fuel and any other radioactive substances, and installations within the meaning of Section 7 and paragraph 2 of sub-section (1) of Section 11, shall be protected against interference or other intervention by third persons;
 9. that the supervisory authority may issue directions for the execution of any provisions made under paragraphs 1 to 8.
- (2) The fundamental right to physical inviolability (first sentence of paragraph (2) of Article 2 of the Basic Law [Grundgesetz]) shall be restricted in accordance with paragraph 4 of sub-section (1).

Section 13 - Financial Security to Cover Legal Liability to Pay Compensation for Damage

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

- (2) The financial security to be provided in pursuance of sub-section (1) shall:
1. be in due proportion to the hazards of the installation or the activities involving liability under Section 25; as a general rule, it should not fall short of the maximum insurance cover obtainable on the insurance market at premiums which are in reasonable proportion to the financial or other interests in the operation of such installation or in the exercise of such activities;
 2. ensure fulfilment of the legal liability to pay compensation for damage to an extent appropriate to the particular circumstances, in all other cases where, according to the provisions of this Act, or of a statutory ordinance made thereunder, an activity requires a licence.
- (3) Within the limits laid down by sub-section (2), and in order to achieve the purposes specified in Section 1, more detailed provisions may be made by statutory ordinance as to the measures required to provide financial security to cover legal liability to pay compensation for damage.
- (4) The Bund (with the exception of the Federal German Railways /Deutsche Bundesbahn), in the case of carriage in public transport) and the Laender shall not be required to provide financial security. In so far as a Land is liable under Section 25, the licensing authority shall determine, with appropriate application of sub-sections (1) and (2) and of the statutory ordinance made in pursuance of sub-section (3), the terms and amount of compensation which, notwithstanding further obligations under Section 38, the Land shall pay in fulfilment of the legal liability, without being indemnified by the Bund as provided in Section 36. For the application of this Act, the aforesaid liability shall be deemed equivalent to the provision of financial security.
- (5) For the purposes of this Act legal liability to pay compensation shall mean the liability to pay compensation for damage as laid down in Civil Law. It shall not include liabilities of the nature specified in Section 903 of the Reich Insurance Code (Reichs-versicherungsordnung); but it shall include liability to save harmless in pursuance of sub-section (4) of Section 7 of this Act, in conjunction with Section 26 of the Trading and Industrial Code, and similar liabilities to pay indemnities or compensation only in so far as the damage or impairment has been caused by an accident.

Section 14 - Financial Security and Liability for Incidents Involving Liability under Section 25

The special provisions of Sections 15 and 16 shall apply additionally to the financial security to be provided in respect of installations and activities involving a liability under Section 25.

Section 15 - Third Party Liability Insurance

- (1) Where financial security is provided by means of third party liability insurance, Sections 158(c) to 158(h) of the Insurance Contracts Act (Gesetz Über den Versicherungsvertrag) shall apply as appropriate. Where sub-section (4) of Section 158(c) of the Insurance Contracts

Act applies, indemnification by the Bund under Section 36 shall not apply. Sub-section (3) of Section 156 of the Insurance Contracts Act shall not be applicable.

- (2) Third party liability insurance shall cover the legal liability to pay compensation which is incurred as a result of the effects specified in Section 25 by persons who -
1. with the consent of the person under obligation to provide financial security, operate, use, or have operated or used the installation, in addition to or in place of such person;
 2. being duly authorized, effect or have effected any supply of goods, services or work for the planning, erection, putting into operation, utilization, maintenance or repair of the installation, or for the disposal of waste;
 3. have or had been appointed by the person under obligation to provide financial security, or such other person as specified in paragraph 1 or 2, to perform any act for the planning, erection, putting into operation, utilization, maintenance or repair of the installation, or for the disposal of waste;
 4. ~~in the case to which sub-section (2) of Section 25 refers, in addition to the person responsible for providing financial security, take or have taken part in the carriage or, being duly authorized, effect or have effected any supply of goods or services in connection with the carriage or are or have been engaged in an activity concerned with such carriage~~ (*)

Section 16 - Other Forms of Financial Security

- (1) Where financial security is not provided in the form of third party liability insurance, but in the form of indemnification or a guarantee furnished by a third person, the provisions of Section 15 shall apply correspondingly.
 - (2) Where financial security is provided in a way other than that specified in Section 15 or in sub-section (1) of this Section, the person under obligation to provide such financial security shall, notwithstanding Section 38, be held liable, if compensation is claimed from such persons as are specified in sub-section (2) of Section 15, for damage of the kind specified in Section 25, for an amount determined in accordance with sub-section (1) of Section 13, and in the same manner and to the same extent as an insurer would be liable under Section 15, if the third party liability insurance cover is adequate in accordance with this Act and such statutory ordinances as are made thereunder.
 - (3) Sub-section (2) shall apply correspondingly to the Bund and the Laender.
- (x) Section 1 of the Second Act of 28th August, 1969, to Amend and Supplement the Atomic Energy Act [BGBL I, p. 1429]

Section 17 - Restriction, Conditions, Revocation

- (1) Licences and general permits granted under this Act or under a statutory ordinance made thereunder shall be issued in writing. They may contain restrictions, and may be made subject to certain conditions, with a view to the purposes specified in Section 1. Conditions may subsequently be imposed so far as may be necessary to achieve the purposes specified in paragraphs 2 and 3 of Section 1. A time-limit may be imposed on licences other than those issued under Section 7, and on general permits.
- (2) Licences and general permits may be revoked -
 1. where they have not been used within a period of two years, unless otherwise provided in the licence or general permit;
 2. where one of their pre-requisites has not existed from the beginning, or has subsequently ceased to exist, and no remedial action has been taken within a reasonable period; or
 3. where the provisions of this Act or statutory ordinances made thereunder, or orders or directions issued by the supervisory authorities, or the terms and conditions contained in the notice concerning the licence or general permit, have been seriously or repeatedly violated, or where a condition subsequently imposed has not been complied with and no remedial action has been taken within a reasonable period.
- (3) Licences shall be revoked where the financial security provided does not satisfy the requirements of sub-section (1) of Section 13, and where the person under obligation to provide financial security fails to furnish proof, within a reasonable period to be fixed by the public authority, that he has provided the financial security stipulated.
- (4) Licences or general permits shall also be revoked wherever such revocation is necessary on account of substantial risk to employees, third persons or the general public, and conditions subsequently imposed cannot provide a remedy within a reasonable period.

Section 18 - Reparation for Revocation

- (1) Where a licence or general permit granted under this Act or a statutory ordinance made thereunder is revoked, appropriate reparation shall be paid to the licensee. Where the revocation is effected by the Bund, the Bund shall be liable to pay the reparation; where the revocation is effected by an authority of a Land, such Land shall be liable. The amount of reparation to be paid shall be determined with due regard to the public interest and that of the person concerned, and shall take into account the reasons which have led to the revocation. The reparation shall be limited to the expense incurred by the person affected, or in the case of an installation to the current value of such installation. In the event of dispute as to the amount of reparation, legal proceedings may be taken in Civil Courts.
- (2) There shall be no liability to pay reparation-
 1. where a holder of a licence or general permit has obtained such licence or general permit by making statements which are incorrect or incomplete in a material particular;

2. where a holder of a licence or general permit, or persons employed by him to carry out activities thereunder, have by their conduct given cause for the revocation of the licence or general permit, in particular, by serious and repeated violation of the provisions of this Act, or of statutory ordinances made thereunder, or of orders and directions issued by the supervisory authority, or of the terms and conditions of the notice concerning the licence or general permit, or by non-compliance with conditions subsequently imposed;
 3. where the revocation had to be ordered owing to subsequent exposure of employees, third persons or the general public to serious hazards arising from the installation or activity for which a licence has been granted.
- (3) Sub-sections (1) and (2) shall apply correspondingly to conditions subsequently imposed under the third sentence of sub-section (1) of Section 17.
 - (4) Where a Land is liable for reparation, the Bund or another Land shall be under obligation to contribute, according to their respective interests in the revocation, having regard to all the facts. The same shall apply where the Bund is liable to pay reparation.

Section 19 - Government Supervision

- (1) Any handling of or transactions in nuclear fuel or other radioactive substances, the erection, operation and possession of installations of the type specified in Section 7 and paragraph 2 of sub-section (1) of Section 11, and any handling of or transactions in installations, apparatus and equipment of the kind specified in paragraph 3 of sub-section (1) of Section 11, as well as the carriage of such substances, installations, apparatus and equipment, shall be subject to Government supervision. In particular, the supervisory authorities shall ensure compliance with the provisions of this Act and of statutory ordinances made thereunder, with such orders and directions as are issued by the supervisory authorities hereunder, and with the terms and conditions of the notice concerning the licence or general permit, and any conditions subsequently imposed. The provisions of Section 139(b) of the Trading and Industrial Code shall apply correspondingly to the powers and duties of the supervisory authorities.
- (2) Any person commissioned by the supervisory authority, and any expert called in by the said authority in pursuance of Section 20, or any person commissioned by other authorities called in, shall at all times have authority to enter places where there are source material, nuclear fuel and other radioactive substances, installations of the type specified in Section 7 and paragraph 2 of sub-section (1) of Section 11, or if installations, apparatus or equipment of the type specified in paragraph 3 of sub-section (1) of Section 11, or places where there is radiation originating therefrom, and to enter places where there is reason to believe that such conditions exist; and such persons shall have authority to carry out all forms of examination necessary for the performance of their duties. They may request the persons in charge, or employees of such places, to provide them with any information that they may require in the course of such examination. Otherwise, Section 24(b) of the Trading and Industrial Code shall apply correspondingly. The fundamental right to inviolability of domicile as laid down in Article 13 of the Basic Law, shall be restricted so far as may be necessary for the exercise of these powers.

- (3) The supervisory authority may order that a state be discontinued which is contrary to the provisions of this Act or to statutory ordinances made thereunder, or to the terms and conditions of the notice concerning the licence or general permit, or to any condition subsequently imposed, or from which danger to life, health or property might result through the effects of ionizing radiation. In particular, the supervisory authority may order -
1. that safety measures shall be taken, and may specify such measures;
 2. that nuclear fuel and other radioactive substances shall be stored, or kept in custody, in a place designated by it;
 3. that the handling of nuclear fuel or other radioactive substances, the erection or operation of installations of the type specified in Section 7 and paragraph 2 of sub-section (1) of Section 11, or the handling of installations, apparatus or equipment of the type specified in paragraph 3 of sub-section (1) of Section 11 shall be suspended temporarily, or permanently, if the requisite licence has not been granted, or if the revocation has been absolute.
- (4) Nothing herein contained shall affect the supervisory powers conferred by other legal provisions, or such general powers as result from Land legislation.

Section 20 - Experts

Experts may be consulted by the competent authorities in the licensing and control proceedings in accordance with this Act and such statutory ordinances as are made thereunder. Section 24(b) of the Trading and Industrial Code shall apply correspondingly.

Section 21 - Costs

- (1) Fees may be charged, and repayment of expenses claimed, in respect of any licence or general permit issued under this Act or any statutory ordinance made thereunder; such expenses shall include the expenses of any consultation of experts. Fees and expenses shall be paid by the applicant. In so far as objections of third persons to the erection of an installation within the meaning of Section 7 have to be examined, such objectors may be charged with any expenses incurred thereby, where the objections are obviously unjustified.
- (2) Fees may be charged, and repayment of expenses claimed, in respect of Government custody. Such fees and expenses shall be borne jointly and severally by the person delivering and the person entitled to use the material.
- (3) In so far as Government inspection has made it necessary to consult experts, the person subjected to such inspection shall defray such costs as result therefrom.
- (4) The expenses of any safety measures or medical examinations carried out under a statutory ordinance made in pursuance of this Act, or any order issued thereunder, shall be borne by the person who, by virtue of this Act or of any statutory ordinance made thereunder, requires a licence for any activity for which such safety measures or medical examination are necessary.

- (2) The costs to be charged under sub-sections (1) and (2), the conditions under which exemption from such charges shall or may be granted, and the procedure to be observed in making such charges, shall be governed by statutory ordinance.
- (6) To the extent that Land authorities issue licences and general permits under a statutory ordinance pursuant to Section 11, the regulations of the Land concerning fees shall apply.

P A R T I I I

PUBLIC AUTHORITIES

Section 22 - Competence for Import and Export Licences, Import and Export Control

- (1) The Federal Office for Trade and Industry (Bundesamt für gewerbliche Wirtschaft) shall decide on applications for licences under Section 3, and on the revocation of licences already issued. The same shall apply where statutory ordinances made under Section 11 call for import and export licences.
- (2) The Federal Minister of Finance (Bundesminister der Finanzen), or the customs authorities appointed by him, and in the free port of Hamburg the Free Port Authority of the Free and Hanseatic City of Hamburg (Freihafenamt der Freien und Hansestadt Hamburg), shall be responsible for the control of imports and exports.
- (3) In so far as the Federal Office for Trade and Industry makes any decisions by virtue of sub-section (1), it shall be bound by the technical instructions issued by the Federal Minister of Nuclear Energy and Water Economy, notwithstanding its subordination to the Federal Minister of Economics (Bundesminister für Wirtschaft) and his powers to issue instructions based on other legal provisions.

Section 23 - Competence for Custody and for Carriage and Storage Licences

The Federal Institute of Physics and Technology (Physikalisch-Technische Bundesanstalt) shall be competent for Government custody of nuclear fuel, for the issue of licences for the carriage of nuclear fuel, for the issue of licences for storage of nuclear fuel other than Government custody, and for the revocation of such licences. In such cases, the said Institute shall act in accordance with the technical instructions issued by the Federal Minister of Nuclear Energy and Water Economy.

Section 24 - Competence of Land Authorities

- (1) All other administrative functions under Part II and any statutory ordinances made thereunder shall be discharged by the Laender on behalf of the Bund. Control of any carriage of nuclear fuel and of other radioactive substances by rail and by sea which is effected by the German Federal Railways (Deutsche Bundesbahn) shall, however, be exercised by such bodies of the German Federal Railways as have been designated by the Federal Minister of Transport (Bundesminister für Verkehr). (*)

(*) Section 1 of the First Act of 23rd April, 1963, to Amend and Supplement the Atomic Energy Act [BGBl I, p. 201]

- (2) The supreme Land authorities (oberste Landesbehörden) designated by the Land governments shall be competent to issue and revoke licences under Sections 7 and 9. These authorities shall exercise control over installations as under Section 7, and over the use of nuclear fuel outside such installations. In particular cases, they may delegate their functions to subordinate authorities. Any complaints against their directions shall be decided upon by the supreme Land authorities. In so far as provisions other than those laid down in this Act confer supervisory powers on any other authorities, such competencies shall not be affected.
- (3) In matters concerning the sphere of activity of the Federal Armed Forces (Bundeswehr), the Federal Minister of Defence (Bundesminister für Verteidigung), or the authorities designated by him, shall, together with the Federal Minister of Nuclear Energy and Water Economy, be the competent authority referred to in sub-section (1) and (2).

P A R T I V

LIABILITY

Section 25 - Liability for Installations

- x (1) The operator of an installation within the meaning of Section 7, or of a manufacturing installation for the preparation or processing of nuclear fuel, shall, subject to Section 38, be liable to pay compensation, in accordance with Sections 27 to 34 of this Act, for loss of life, personal injury or deterioration of health, caused to any person, or for damage caused to property, as a result of any process of nuclear fission carried out in such installations or of radiation from any radioactive substance emanating from such installations or from any equipment or any activity, including waste disposal, in connection with the operation of such installations. (*)
- x (2) The operator of an installation situated in the area to which this Act applies shall be liable to pay compensation in accordance with sub-section (1) even where the above-mentioned effects are caused by nuclear fuel /except substances specified in (e) of sub-section (1) of section (2)/ in the course of carriage from such installation; this provision shall not apply if the incident giving rise to the damage occurs after the consignee has taken charge of the nuclear fuel. If the nuclear fuel is being carried to an installation situated in the area to which this Act applies, the operator of such installation shall be liable, in accordance with sub-section (1), to pay compensation if such incident occurs after he has taken possession of such substances. When nuclear fuel is being carried to a consignee outside the area to which this Act applies, liability to pay compensation as laid down in the first sentence above, shall apply only if the incident occurs before the nuclear fuel has been unloaded from the means of transport which conveyed it across the frontier. In the case of carriage of nuclear fuel coming from a consignor outside the area to which this Act applies, liability to pay compensation provided for in the second sentence above shall apply only if the incident occurs after

(*) Section 1 of the Second Act of 28th August, 1969, to Amend and Supplement the Atomic Energy Act [BGBL I, p. 1429]

the nuclear fuel has been loaded on the means of transport by which it is to be conveyed across the frontier. In so far as the damage occurs in a foreign country, in the cases referred to in the third and fourth sentences above, liability to pay compensation for damage shall not arise if a statutory ordinance so stipulates in relation to such country; such ordinance may be enacted only where there is no guarantee of reciprocity; (*)

- (3)_x For the application of this Part, damage to property shall also be deemed to exist where the serviceability of property has been impaired by the effects of radiation from any radioactive substance.

Section 26 - Liability for Possession of Radioactive Substances or Substances Affected by Nuclear Fission or Nuclear Fusion in Other Instances

- (1)_x Where, in cases other than those specified in Section 25, loss of life, personal injury or deterioration of health has been caused to any person or damage has been caused to property through the effects of any nuclear fission process, or of radiation from any radioactive substance, the holder of such substance affected by nuclear fission, or of the radioactive substance from which the radiation is emitted, shall be liable to pay compensation for such injury or damage in accordance with Sections 27 to 34. There shall be no liability to pay compensation if the damage be caused by an event which the holder and such persons as are acting for him in connection with the possession could not avoid, even by taking every reasonable precaution under the circumstances, and which is due neither to any defective condition of the safety devices nor to any failure in their performance.
- (2) Sub-section (1) shall apply correspondingly where damage of the kind specified in sub-section (1) has been caused by the effect of nuclear fusion.
- (3)_A Any person who has lost possession of the substance, without having transferred it to a person entitled to such possession in accordance with this Act or any statutory ordinance made thereunder, shall be liable as if he were the holder.
- (4) The provisions of sub-sections (1) to (3) shall not apply-
1. where the radioactive substances have been applied to the injured person by a doctor, or a dentist, or under the supervision of a doctor or dentist, in the course of medical treatment;
 2. where a legal relationship exists between the holder and the injured person under which the latter has accepted the risk associated with the substance.
- (5)_A The carrier of substances on behalf of a third party shall not be liable to pay compensation under the provisions of sub-sections (1) to (3). So long as such substances have not come into the possession of the consignee, the liability to pay compensation under such provisions rests with the consignor, irrespective of his being the holder of such substances or not.
- (*) Section 1 of the Second Act of 28th August, 1969, to Amend and Supplement the Atomic Energy Act, [BGBl I, p. 1429]

Section 27 - Contributory Negligence of the Injured Person

Where negligence of the injured person has contributed to the injury sustained, Section 254 of the Civil Code (Bürgerliches Gesetzbuch) shall apply; in the event of damage to property, the negligence of the person in actual control of the property shall be deemed to be that of the injured person.

Section 28 - Extension of Compensation in Case of Death

- (1) In the event of death, compensation shall be made by payment of the costs of any attempted cure, and for such pecuniary loss as has been sustained by the deceased during his illness by reason of loss or reduction of earning capacity, increase of needs or handicap in regard to his career. In addition, the person liable shall refund funeral costs to the person responsible for paying such costs.
- (2) If, at the time of the injury, the deceased was, or might have become, legally responsible for the maintenance of a third person who loses this right as a result of the decease the person liable shall pay compensation to such third person, to the extent of the maintenance for which the deceased would have been liable during his expected life. The liability to pay compensation shall likewise exist where, at the time of the injury, the third person was conceived but not yet born.

Section 29 - Extent of Compensation in Case of Personal Injury

In the event of personal injury or injury to health, compensation shall be such as to cover medical expenses and the pecuniary loss sustained by the injured person by reason of temporary or permanent loss or reduction of earning capacity, increase of his needs or handicap in regard to his career as a result of the injury.

Section 30 - Periodic Payments

- (1) Compensation for any loss or reduction of earning capacity, any increase of needs or any handicap in regard to the career of the injured person, and any compensation due to a third person under sub-section (2) of Section 28, shall for the future be discharged by periodic payments.
- (2) The provisions of sub-sections (2) to (4) of Section 843 of the Civil Code, and of paragraph 6 of Section 708 of the Code of Civil Procedure (Zivilprozessordnung) shall apply correspondingly.
- (3) Where no security has been required from the person ordered by court decision to make periodic payments, the claimant shall nevertheless be entitled to demand security, if the financial circumstances of the person liable have considerably deteriorated; in the same circumstances, the claimant shall also be entitled to demand an increase in the amount of any security awarded in the judgement.

Section 31 - Maximum Amounts of Compensation

The person liable to pay compensation for damage under Section 25 or 26 shall be liable to pay -

1. in the event of the death of or injury to a person, in so far as compensation as specified in Section 30 is concerned, an annual payment not exceeding DM 15,000;

2. in the event of damage to property, an amount not exceeding the ordinary value of the damaged property plus the cost of protection against radiation hazards originating therefrom.

Section 32 - Limitation of Action

- λ (1) Claims for compensation under this Part shall be barred after two years from the date when the claimant became aware of the damage and of the identity of the person liable and, irrespective of such knowledge, after thirty years starting from the date of the incident which caused the damage.
- (2) Where negotiations concerning compensation are pending between the person liable for compensation and the claimant, the run of the limitation period shall be suspended until such time as either party refuses to continue such negotiations.
- (3) Otherwise, the provisions of the Civil Code concerning limitation of action shall apply.

Section 33 - Additional Liability

Save as otherwise provided in Section 38, nothing herein contained shall affect any other legal provision under which the operator of an installation, or the holder of a substance affected by nuclear fission or fusion, or of a radioactive substance, is liable to a greater extent than under the provisions of this Part, or under which another person is liable for the damage. (*)

Section 34 - Several Persons Liable

- (1) Where two or more persons are legally liable, as operators of an installation or as holders of substances affected by nuclear fission or fusion or of radioactive substances, to pay compensation to a third person for damage resulting from the effects of nuclear fission, nuclear fusion or radiation from radioactive substances, the liability and the extent of compensation due from each of the persons liable shall be apportioned between them according to the particular circumstances of the case and, in particular, to the extent to which the damage has mainly been caused by one or the other person. The same shall apply to the liability of one operator or holder towards another, if the operator of an installation or the holder of a substance has suffered damage. (*)
- (2) Sub-section (1) shall apply correspondingly where, in addition to the operator of the installation or the holder of the substance, any other person is legally liable for the damage.

Section 35 - Repealed (*)

Section 36 - Indemnification by the Bund

- λ (1) Where any person under obligation to provide financial security under paragraph 1 of sub-section (2) of Section 13, or any person as specified in sub-section (2) of Section 15, has incurred legal liability to pay compensation as a result of effects of the kind specified in Section 25, the Bund shall indemnify such person against his liability to pay compensation, to the extent that such liability
- (*) Section 1 of the Second Act of 28th August, 1969, to Amend and Supplement the Atomic Energy Act [BGBl I, p. 1429]

is not covered, or cannot be met by the financial security provided; provided that the requisite licence has been granted, and operation of such installation or performance of such activity has been started by 31st December 1980. In the cases specified in sub-section (2) of Section 25, the Bund shall be under no obligation to indemnify to the extent that under the terms of a statutory ordinance issued by virtue of Section 10, no financial security is required for the carriage of nuclear fuel. Indemnification against liability resulting from an incident causing damage shall be limited to a maximum amount of DM 500 million, less the amount to which the liability incurred is covered, or can be met by the financial security provided. (*)

(2) Indemnification under sub-section (1) shall not apply to liability to pay compensation -

1. in respect of damage to installations or to property, equipment, apparatus or materials of any kind, including nuclear fuel, appertaining thereto;
2. in respect of any damage sustained by the person under obligation to provide financial security, or any person as specified in sub-section (2) of Section 15, during operation of an installation or such activity as specified in sub-section (2) of Section 15.

(3) Save as otherwise hereinafter provided, Sections 34, 62 and 67 and the provisions of Chapter 6 of Part 2 of the Insurance Contracts Act, including provisions on compulsory insurance, shall apply as appropriate.

Section 37 - Apportionment

(1) Where legal liability to pay compensation resulting from an incident causing damage is expected to exceed the amount of DM 500 million, apportionment of the moneys available as compensation for damage, and the procedure to be observed therein, shall be governed by an Act and, pending enactment, by statutory ordinance.

(2) The statutory ordinance referred to in sub-section (1) may only make such stipulations regarding apportionment of the moneys available as compensation for damage as are required to avert hardship. Such statutory ordinance shall ensure that satisfaction of the claims of the injured persons as a whole shall not be unduly prejudiced by the satisfaction of individual claims.

Section 38 - Exclusion of Claims

(1) No compensation in excess of the amount stipulated in sub-section (1) of Section 36 shall be paid by virtue of any legal liability to pay compensation for damage which has resulted from such effects as are specified in Section 25 and is covered by an indemnification by the Bund.

(2) In the case of damage not covered by indemnification under sub-section (1), second sentence and sub-section (2) of Section 36, ~~liability to pay compensation~~ in pursuance of Section 25 shall be excluded. Any person under obligation to provide financial security, and the persons specified in sub-section (2) of Section 15, can only be made liable by virtue of another legal liability to pay compensation for damage, if the injured person cannot obtain compensation in another way. No consideration will be given to any other

(*) Section 1 of the Second Act of 28th August, 1969, to Amend and Supplement the Atomic Energy Act [BGBl I, p. 1429]

possibility of compensation, if a legal claim for compensation against a third person is involved. (*)

- (3) The provisions of sub-section (1), and the second and third sentences of sub-section (2) shall not apply, where the damage has been wilfully caused by the person liable, or, in the case of a body corporate, by its legal representative in the discharge of his functions.
- (4) To the extent that the Bund is liable for damage of the kind specified in Section 25, sub-sections (1) to (3) shall apply as appropriate.
- (5) Any person entitled under sub-section (3) to compensation in excess of that specified in sub-section (1) may claim such compensation only in so far as he has not yet obtained, or obviously cannot obtain, satisfaction under the procedure specified in Section 37.

Section 39 - Exemption from Liability. Recourse

- (1) Save in such cases as result from application of the provisions already laid down in sub-section (3) of Section 36, the Bund shall be exempt from the obligation to indemnify a person who is to be indemnified against liability in accordance with Section 36-
 1. where the damage has been wilfully caused by such person or, in the case of a body corporate, by its legal representative in the discharge of his functions;
 2. where such person is a national of a foreign state, in respect of which an order to that effect has been issued by statutory ordinance, such order shall only be issued if there be no guarantee of reciprocity;
 3. where such person has acknowledged or satisfied a claim for compensation without the consent of the Bund, unless such acknowledgment or satisfaction could not have been refused by him without obvious inequity.
- (2) Furthermore, the Bund shall be exempt from the obligation to indemnify the person under obligation to provide financial security in so far as the security provided falls short of the amount determined in pursuance of sub-section (1) of Section 13 or fails to satisfy claims.
- (3) The Bund may not invoke exemption from liability under sub-sections (1) and (2) as against the injured person.
- (4) The Bund shall have a right of recourse against -
 1. any person in respect of whom the Bund is exempt from liability, in so far as the Bund has to pay compensation in pursuance of sub-section (3);
 2. any person under obligation to provide financial security, in so far as the Bund, in the event of claims against any person specified in sub-section (2) of Section 15, has to pay compensation for which the person under obligation to provide financial security is also held liable; but not in excess of the extent to which such person has to provide financial security to cover such liabilities.

(*) Section 1 of the Second Act of 28th August 1969 to Amend and Supplement the Atomic Energy Act [BGBl I, p. 1429]

- 2
- (5) Where the Bund is under obligation to indemnify, as a result of the insurer of a person to be indemnified, a guarantor or any other person jointly liable having acknowledged or satisfied a claim for damages without the consent of the Bund, although it was to be expected that the damage would exceed the amount determined in accordance with sub-section (1) of Section 13, the Bund shall have a right of recourse against such persons, unless such acknowledgement or satisfaction could not have been refused by these persons without obvious inequity.

P A R T V

PENALTIES AND FINES

Section 40 - Causing an Explosion by Nuclear Energy

- (1) Any person who causes or attempts to cause an explosion by the release of nuclear energy, and thereby to endanger the life or health of another person, or property of considerable value belonging to another person, shall be liable to penal servitude for a term of not less than five years.
- (2) Any person who causes an explosion by the release of nuclear energy, thereby negligently endangering the life or health of another person, or property of considerable value belonging to another person, shall be liable to penal servitude for a term not exceeding ten years. Where extenuating circumstances exist, the penalty shall be imprisonment for a term of not less than one year.
- (3) In particularly grave cases, offences under sub-section (1) shall be punishable with penal servitude for a term of not less than ten years, or for life, and offences under sub-section (2) with penal servitude for a term of not less than five years. In general, a case shall be deemed to be particularly grave where the offender has caused the death of another person by his gross negligence. (*)

Section 41 - Misuse of Ionizing Radiation

- (1) Any person who, with intent to injure the health of another person, exposes or attempts to expose such person to ionizing radiation of such kind as will injure the person's health, shall be liable to penal servitude for a term not exceeding ten years. Where extenuating circumstances exist, the penalty shall be imprisonment for a term of not less than six months.
- (2) Where the offender exposes or attempts to expose a great number of persons to such radiation, he shall be liable to penal servitude for a term of not less than five years.
- (3) In particularly grave cases, offences under sub-section (1) shall be punishable with penal servitude for a term of not less than five years, and offences under sub-section (2), with penal servitude for a term of not less than ten years, or for life. In general, a case shall be deemed to be particularly grave where the offender has caused the death of another person by his gross negligence. (*)
- (4) Any person who, with intent to impair the serviceability of property of considerable value belonging to another person, exposes such pro-
- (x) Section 3 of the Seventh Act of 1st June, 1964 to Amend the Penal Code [BGBL I, p. 337]

perty to ionizing radiation of such kind as will impair the service-ability of the property shall be liable to imprisonment. The attempt shall be punishable.

Section 42 - Preparatory Acts

Any person who, in preparation for an offence punishable under sub-section (1) of Section 40 or sub-section (2) of Section 41, produces, imports, obtains for himself or for another person, stores or makes available to another person nuclear fuel or radioactive substances, or such appliances as are necessary for the execution of such offence, or performs an equally dangerous act of this kind, shall be liable to penal servitude for a term not exceeding ten years. Where extenuating circumstances exist, the penalty shall be imprisonment for a term of not less than six months.

Section 43 - Fines and Police Supervision

In addition to penal servitude or imprisonment under Sections 40 to 42, a fine of unlimited amount and subjection to police supervision may be imposed.

Section 44 - Acts of Repentance

- (1) ~~The Court may, in the cases specified in sub-section (1) of Section 40 and sub-section (2) of section 41, impose at its discretion a less severe penalty (Section 15 of the Penal Code), if the offender voluntarily abandons his activity or otherwise averts the danger. (*)~~
- (2) ~~The Court, may, in the cases specified in sub-section (2) of Section 40, sub-section (1) of Section 41 and Section 42, at its discretion, impose a less severe penalty (Section 15 of the Penal Code), or impose no penalty under those provisions, if the offender voluntarily abandons his activity or otherwise averts the danger. (*)~~
- (3) If the danger is averted without the help of the offender, it shall suffice that he has seriously endeavoured to avert it of his own free will.

Section 45 - Punishable Handling of Nuclear Fuel and Ionizing Radiation

- (1) Any person who, without such licence as is required under this Act, wilfully:
 1. imports or exports nuclear fuel,
 2. carries nuclear fuel,
 3. stores nuclear fuel outside Government custody,
 4. erects, operates or otherwise holds an installation for the production or fission of nuclear fuel, or for the reprocessing of irradiated nuclear fuel, or materially alters the installation or its operation,

(*) Section 70 of the First Act of 25th June, 1969, to Amend the Penal Code [BGBL I, p. 645]

5. treats, processes or otherwise uses nuclear fuel outside an installation for the production or fission of nuclear fuel, or for the reprocessing of irradiated nuclear fuel, or any person who deviates to a considerable extent from the procedure laid down in a licence issued under sub-section (1) of Section 9 for treatment, processing or other use, or who materially alters the installation or its location as specified in the licence,

shall be liable to imprisonment and a fine not exceeding DM 100,000, or to one or the other of these penalties.

- (2) The same penalties shall be incurred by any person who wilfully -
1. fails to surrender nuclear fuel without delay, in contravention of sub-sections (3) and (4) of Section 5;
 2. issues nuclear fuel to unauthorized persons, in contravention of sub-section (5) of Section 5;
 3. contravenes any provision of an ordinance made under Sections 11 and 12, where such ordinance refers to this penal provision.
- (3) Any person who, by an act of the kind specified in sub-section (1) or (2), knowingly endangers the life or health of another person, or property of considerable value belonging to another person, such danger originating from nuclear fission or ionizing radiation, shall be liable to imprisonment for a term of not less than three months. In addition, a fine not exceeding DM 100,000 may be imposed.
- (4) Any person who, through negligence, commits one of the acts specified in sub-sections (1) and (2) shall be liable to imprisonment for a term not exceeding two years and a fine not exceeding DM 100,000, or to one or the other of these penalties.

Section 46 - Statutory Offences

- (1) Any person who, wilfully or negligently, contravenes the determination under sub-section (1) of Section 13, conditions imposed under sub-section (1) of Section 17, or immediately enforceable orders by the Government supervisory authority under sub-section (3) of Section 19, shall be guilty of a statutory offence.
- (2) A person shall also be guilty of a statutory offence if he wilfully or negligently-
1. contravenes any provision of an ordinance made under Section 11 or 12;
 2. contravenes any immediately enforceable direction, issued by the supervisory authority under an ordinance made in pursuance of paragraph 9 of sub-section (1) of Section 12,
- where such ordinance refers to this provision on fines.
- (3) The statutory offences specified under sub-section (1) or (2) shall make the offender liable to a fine not exceeding DM 100,000. (*)

(*) Section 78 of the Act for Incorporating the Act on Statutory Offences into Existing Legislation of 24th May 1968 [BGBL I, p. 503].

- (4) ~~It shall furthermore be deemed to be a statutory offence if, in the course of the carriage, a person wilfully or negligently fails to carry the proof of the licence required under Section 4 or under a statutory ordinance made in pursuance of Section 11 or 12. (*)~~ Such offence may render the offender liable to a fine not exceeding DM 1,000.
- (5) Where the import or export of radioactive substances requires a licence, by virtue of an ordinance made under Section 11, the Federal Office for Trade and Industry shall be competent to prosecute, and impose penalties in respect of statutory offences committed by failure to comply with such requirement, or by violation of any condition imposed by the Federal Office in respect of such licence. (**)

Section 47 - Punishable Violation of Safety Regulations, Conditions and Orders

Any person who, by a wilful act as specified in sub-section (1) or (2) of Section 46, wilfully or negligently endangers the life or health of another person, or property of considerable value belonging to another person, through nuclear fission or ionizing radiation, shall be liable to imprisonment and a fine not exceeding DM 100,000, or to either of these penalties. Where the offender causes the danger knowingly, the penalty shall be imprisonment for a term of not less than three months; in addition, a fine not exceeding DM 100,000 may be imposed.

Section 48 - Violation of Obligations concerning Production and Supply

- (1) Any person who knowingly produces or supplies defective installations for the production or fission of nuclear fuel, or for the reprocessing of irradiated nuclear fuel, or who produces or supplies defective objects intended for the erection or operation of such installation, and thereby knowingly endangers the life or health of another person, or property of considerable value belonging to another person, such danger being connected with the effects of a nuclear fission process or radiation from a radioactive substance, shall be liable to imprisonment for a term of not less than six months.
- (2) The attempt shall be punishable.
- (3) In particularly grave cases the penalty shall be penal servitude for a term of not more than ten years.
- (4) Any person who, not knowingly, but wilfully or negligently, causes danger in the cases specified in sub-section (1), shall be liable to imprisonment.

(*) Section 1 of the First Act of 23rd April, 1963, to Amend and Supplement the Atomic Energy Act [BGBl I, p. 201]

(**) Section 78 of the Act for Incorporating the Act on Statutory Offences into Existing Legislation of 24th May, 1968 [BGBl I, p. 503].

Section 49 - Confiscation

Where an offence punishable under Sections 40 to 42, sub-sections (1) to (3) of Section 45, Section 47 or Section 48 has been committed:

1. any object produced by such act or which was used or intended for the commission of such act; and
2. any object to which an offence punishable under Section 42, sub-sections (1) to (3) of Section 45, Section 47 or Section 48 relates,

may be confiscated. Where an offence punishable under sub-section (1) or (2) of Section 46 has been committed wilfully, the provisions of sub-paragraph 2 of the first sentence hereof shall apply accordingly (x).

Section 50 - Repealed (x)

Section 51 - Relation to Other Penal Provisions

- (1) Offences under Section 40, sub-section (2) of Section 41, and Section 42, are crimes constituting a public danger, within the meaning of Section 138 of the Penal Code (Strafgesetzbuch).
- (2) They shall be deemed equivalent to the crimes involving the use of explosives within the meaning of paragraph 3 of sub-section (3) of Section 4 of the Penal Code.
- (3) Where an act is punishable under the provisions of this Act only, or in conjunction with the provisions of the Penal Code, Sections 9 and 11 of the Act on the Criminal Use of Explosives Constituting a Public Hazard (Gesetz gegen den verbrecherischen und gemeingefährlichen Gebrauch von Sprengstoffen) of 9th June 1884 (Reichsgesetzblatt, page 61) shall not apply. (xx)
- (4) Crimes under Section 40 or sub-section (2) of Section 41 shall be under the jurisdiction of the Courts of Assizes (Schwurgerichte) (Sections 79 and 80 of the Judicature Act [Gerichtsverfassungsgesetz]).

Section 52 - Disclosure of Secrets

- (1) Any person who, without authority, discloses a business or technical secret, or a secret confided or known to a medical practitioner or dental surgeon or person working under him, in their respective capacities, which has come to his knowledge as a member of an authority entrusted with the execution of this Act or as an officially appointed expert during his work in connection with this Act, shall be liable to imprisonment for a term not exceeding two years, or to a fine. Legal proceedings shall be taken only at the request of the injured person.
- (x) Section 78 of the Act for Incorporating the Act on Statutory Offences into Existing Legislation of 24th May 1968 [BGBl I, p. 503].
- (xx) Section 3 of the Seventh Act of 1st June, 1964 to Amend the Penal Code [BGBl I, p. 337].

- (2) Any person who misuses a secret of the nature specified in sub-section (1), which has come to his knowledge under the circumstances referred to therein, in order to procure pecuniary benefit for himself or for another person, or to cause injury to another person, shall be liable to imprisonment. In addition, a fine may be imposed.

P A R T V I

FINAL PROVISIONS

Section 53 - Registration of Damage due to Unknown Causes

Damage which, in the light of existing scientific knowledge, has been caused by the effects of radiation from radioactive substances but cannot be traced to any particular person, shall be registered with and investigated by the Federal Minister of Nuclear Energy and Water Economy.

Section 54 - Issue of Statutory Ordinances

- (1) Statutory ordinances under Sections 11, 12, 13 and sub-section (5) of Section 21, shall be issued by the Federal Government. The same shall apply to statutory ordinances issued under Section 10, in so far as exemption is granted from the requirement of a licence under Section 7. All other statutory ordinances for which this Act provides shall be issued by the Federal Minister of Nuclear Energy and Water Economy.
- (2) The statutory ordinances require the consent of the Bundesrat. This shall not apply to statutory ordinances which merely stipulate physical, technical and radiation biology standards, in place of those laid down in statutory ordinances pursuant to Sections 11 and 12.
- (3) The Federal Government may by statutory ordinance delegate the enabling powers specified in Sections 11 and 12, wholly or in part, to the Federal Minister of Nuclear Energy and Water Economy.

Section 55 - Repeal of Legal Provisions

- (1) The following legal provisions shall cease to have effect:
 1. sub-paragraphs (a) and (b) of paragraph 1 of Article 1 of Law No. 22 of the Allied High Commission of 2nd March 1950, concerning the Control of Materials, Facilities and Equipment Relating to Atomic Energy (Official Gazette of the Allied High Commission for Germany, page 122), as amended by the Laws of the Allied High Commission for Germany No. 53 of 26th April 1951 (Official Gazette of the Allied High Commission for Germany, pages 882 and 990) and No. 68 of 14th December 1951 (Official Gazette of the Allied High Commission for Germany, page 1361);
 2. the Bavarian Act on the Provisional Regulation of the Erection and Operation of Nuclear Reactors and of the Use of Radioactive Isotopes of 13th July 1957 (Bayerisches Gesetz- und Verordnungsblatt, page 147) as amended by the Act of 12th November 1958 (Bayerisches Gesetz- und Verordnungsblatt, page 330);

3. the Hessian Act on the Provisional Regulation of the Erection and Operation of Nuclear Research Reactors and on Radiation Protection of 1st October 1957 (Gesetz- und Verordnungsblatt für das Land Hessen, page 141) as amended by the Act of 30th April 1959 (Gesetz- und Verordnungsblatt für das Land Hessen, page 9);
 4. the Hamburg Act on the Provisional Regulation of the Use of Nuclear Energy of 18th October 1957 (Hamburgisches Gesetz-und Verordnungsblatt, page 465);
 5. the Land North Rhine-Westphalia Act on the Provisional Regulation of the Erection and Operation of Nuclear Installations of 4th February 1958 (Gesetz- und Verordnungsblatt für das Land Nordrhein-Westfalen, page 39);
 6. the Land Baden-Württemberg Act on the Provisional Regulation of the Use of Nuclear Energy of 12th May 1958 (Gesetzblatt für Baden-Württemberg, page 129);
 7. the Berlin Act on the Regulation of the Scientific Use of Nuclear Energy (Atomic Energy Act) of 26th June 1958 (Gesetz- und Verordnungsblatt für Berlin, page 563); this does not apply to Section 8, in so far as contraventions under Section 40 of the First Ordinance under the Atomic Energy Act (Radiation Protection Ordinance) of 22nd October 1958 (Gesetz- und Verordnungsblatt für Berlin, page 1029) are concerned;
 8. the Land Schleswig-Holstein Act on the Erection and Operation of Nuclear Research Reactors and for the Regulation of Radiation Protection of 30th June 1958 (Gesetz- und Verordnungsblatt für Schleswig-Holstein, page 225); this does not apply to Sections 11 to 13, in so far as contraventions under Sections 47 and 48 of the (Police) Ordinance on the Protection against Radiation Hazards (Gesetz- und Verordnungsblatt für Schleswig-Holstein, page 229) are concerned.
- (2) On the coming into force of the first statutory ordinance made under Sections 11 and 12, the following provisions shall cease to have effect:
1. sub-section (4) of Section 4 and sub-section (2) of Section 5 of the Roentgen-Ordinance of 7th February 1941 (Reichsgesetzblatt 1, page 68) as amended by the Ordinance of 17th January 1942 (Reichsgesetzblatt 1, page 31);
 2. such provisions of Law No. 22 of the Allied High Commission as are not superseded by paragraph 1 of sub-section (1) of this Section, and bye-law No. 1 to Law No. 22 of 28th April 1951 (Official Gazette of the Allied High Commission for Germany, page 883);
 3. Section 8 of the Berlin Act of 26th June 1958, in so far as this provision is not superseded by paragraph 7 of sub-section (1);
 4. Sections 11 to 13 of the Schleswig-Holstein Act of 30th June 1958, in so far as these provisions are not superseded by paragraph 8 of sub-section (1);

5. the Bavarian First Ordinance on the Protection of the General Public against Radiation Hazards (First Atomic Energy Ordinance) of 29th August 1957 (Bayerisches Gesetz- und Verordnungsblatt, page 183);
 6. the Schleswig-Holstein (Police) Ordinance on the Protection against Radiation Hazards (Radiation Protection Ordinance) of 17th July 1958 (Gesetz- und Verordnungsblatt für Schleswig-Holstein, page 229);
 7. the Berlin First Ordinance under the Atomic Energy Act (Radiation Protection Ordinance) of 22nd October 1958 (Gesetz- und Verordnungsblatt für Berlin, page 1029).
- (3) Paragraph 10 of sub-section (3) of Section 24 of the Trading and Industrial Code, as amended by the Act of 29th September 1953 (Bundesgesetzblatt 1, page 1459) shall be deleted.

Section 56 - Licences Issued under Land Legislation

- (1) Any licences, exemptions or approvals granted under Land legislation for the erection and operation of installations within the meaning of Section 7, shall continue to have effect. They shall be deemed equivalent to licences granted under Section 7, and the conditions attaching to them shall be equivalent to such conditions as are imposed under sub-section (1) of Section 17. In so far as a licence issued under Land legislation includes stipulations for the provision to be made by the operator of the installation in regard of financial security to cover legal liability to pay compensation for damage, such stipulations shall, subject to the provisions of sub-section (2), be considered a determination within the meaning of sub-section (1) of Section 13.
- (2) Within three months after the coming into force of this Act, the public authority (sub-section (2) of Section 24) shall determine the amount which the operator of the installation must provide as financial security. The latter half of the second sentence of sub-section (1) of Section 13 shall apply correspondingly. Where a liability has been established in pursuance of sub-section (4) of Section 13, such liability shall be retroactive as from the date of the coming into force of this Act.

Section 57 - Exclusion of Certain Legal Provisions

Sections 1 to 4 of the Act on the Criminal Use of Explosives Constituting a Public Hazard of 9th June 1884 (Reichsgesetzblatt, page 61), as amended by the Ordinance of 8th August 1941 (Reichsgesetzblatt 1, page 531), and such legal provisions as are made under the said Act, as well as legal provisions of the Laender concerning explosives, shall not apply to any handling of nuclear fuel.

Section 58 - Validity in Berlin

In accordance with sub-section (1) of Section 13 of the Third Transition Act (Drittes Überleitungsgesetz) of 4th January 1952 (Bundesgesetzblatt I, page 1), this Act shall also be valid in the Land Berlin. Statutory ordinances made under this Act shall apply to the Land Berlin in accordance with Section 14 of the Third Transition Act.

Section 59 - Coming into Force

This Act shall come into force on the day following its promulgation; Sections 40 to 52 shall not come into force in the Land Berlin, however, until the day after promulgation of the Application Act (Übernahmegesetz) in the Gesetz- und Verordnungsblatt für Berlin.

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