

# NATIONAL LEGISLATIVE AND REGULATORY ACTIVITIES

## Algeria

### *Radiation protection*

#### *Decree on Protection Against Ionising Radiation (2005)*

Presidential Decree No. 05-117, adopted on 11 April 2005, repeals any contradictory provisions set forth in the 1986 Decree on radiation protection and control of radioactive substances (see *Nuclear Law Bulletin* No. 44). Nevertheless, the 1986 Decree will remain in force for a maximum period of one year from the date of publication of the new decree in the Official Journal of the Republic of Algeria (hereinafter referred to as OJRA).

The 2005 Decree establishes general provisions on protection against ionising radiation during the production, handling, transportation, importation, transit, storing and disposal of radioactive substances. It contains regulations on the exposure of the public and radiation workers, medical exposure to ionising radiation, and exposure during emergency situations. Activities involving exposure to ionising radiation must comply with the justification, limitation and optimisation principles.

The decree establishes licensing procedures governing the possession and use of radioactive substances, and equipment producing ionising radiation for industrial, agricultural, medical and scientific purposes. Import and export of such substances and equipment must be licensed in advance by the Atomic Energy Commission. The validity period of the licence varies according to the nature and extent of the risks involved in each activity and cannot be issued for more than five years. The decree fixes the obligations of the owners/users of radioactive substances vis-à-vis the protection of radiation workers (restricted areas, self-protection and dedicated training for workers, regular medical exams, appointment of an expert in radiation protection) as well as dose limits for both radiation workers and the public.

Both sealed and unsealed sources must be identified and properly protected. They are subject to radiological and quality control. Sources must be returned to their supplier after use. Moreover, the decree specifies that the control of radioactivity on the national territory is carried out by the Atomic Energy Commission.

The decree also sets out the applicable provisions in the case of a radiological emergency. The user of ionising radiation sources must prepare an emergency plan for its installation, which must be approved by the Atomic Energy Commission and the competent civil protection services. Lastly, the decree specifies that radiation controls are carried out by the Atomic Energy Commission's protection inspectors.

## ***Radioactive waste management***

### *Decree on Radioactive Waste Management (2005)*

Presidential Decree No. 05-119, adopted on 11 April 2005, contains provisions concerning the management of solid and liquid radioactive waste and gaseous waste matter produced by any activity that uses radioactive substances and nuclear materials. It sets out the responsibilities of all those involved in the different stages of radioactive waste management, as well as the administrative conditions applicable (possession of a licence issued by the Atomic Energy Commission). The decree also contains specific provisions for solid and liquid radioactive waste and sets out a classification of the different types of radioactive wastes in an annex.

## ***Food irradiation***

### *Decree on Food Irradiation (2005)*

Presidential Decree No. 05-118, adopted on 11 April 2005 and published in the OJRA No. 27, regulates the treatment, control and trade of food treated by ionisation.

Every irradiation facility must comply with certain radiation protection requirements and hold a proper licence issued by the Atomic Energy Commission. A list containing the types of food susceptible of being irradiated and commercialised, as well as the absorbed doses for each type will be determined by joint decree issued by the Minister for Agriculture and the Minister for Trade.

The operator of an irradiation installation must ensure that its ionising operations are carried out according to a quality assurance programme, approved by the competent services of the Atomic Energy Commission and of the Ministry for Trade. The decree also specifies that each unit of irradiated food must be accompanied by an irradiation treatment certificate.

## **Armenia**

### ***Regime of nuclear materials***

#### *Government Decree Regulating the Licensing Procedure for Use of Ionising Generators, Radioactive Materials and Equipment containing Radioactive Materials (2004)*

Decree N1751-N, adopted on 9 December 2004, regulates licensing procedures governing the use of ionising generators, radioactive materials, and equipment containing radioactive materials in accordance with the 2004 Licensing Law (see *Nuclear Law Bulletin* No. 73) and the 1999 Law for the Safe Utilisation of Atomic Energy for Peaceful Purposes (see *Nuclear Law Bulletin* Nos. 60, 63 and 75; the text of this law prior to its amendment in 2004 is reproduced in the Supplement to NLB No. 65).

Its purpose is to impose certain requirements when issuing a licence for activities involving a level of radioactivity equal to or above the exemption level.

In order to obtain such a licence (valid for a five-year period), any legal entity, manufacturer or physical person must submit an application form to the Armenian National Regulatory Authority (ANRA), accompanied by a certain number of documents, as listed in the decree.

ANRA then has 30 days to review the application and supporting documents, and to organise an inspection if deemed necessary. During the review period, the following is verified:

- compliance with this decree and other relevant legislation;
- applicant's right to undergo such activities;
- compliance with radiation protection rules and standards;
- qualifications and awareness of personnel in relation to implementation of the safety rules and standards, and of any other legal act on the use of nuclear energy.

The licence may be subject to extension, amendment or revocation according to the Licensing Law. The decree also provides for termination in certain specific cases. ANRA is responsible for supervising applications carried out under this licence.

## **Belgium**

### ***Organisation and structure***

*Act Amending the 1994 Act on Protection of the Public and the Environment Against Radiation and Relating to the Federal Agency for Nuclear Control (2005)*

This act, adopted on 20 July 2005, amends certain provisions of the 1994 Act. In particular, it modifies Sections 49, 49 bis and 50 relating to the regime of penalties and inserts 16 new sections into the act.

Fines for breaches of the provisions of the act in war-time have been modified. An administrative fine system is also established, setting a specific fine for each offence. Violations will be recorded in a report established by a criminal investigation agent. This report is transferred to the royal prosecutor who chooses to impose a criminal or an administrative fine. If an offence bears a criminal penalty, any administrative procedure is excluded. Finally, new Sections 62 to 64 establish a simplified administrative procedure which may be applicable to offences not causing personal damage, with the agreement of the offender.

## **Brazil**

### ***Non-proliferation***

*Decree on the National Defence Policy Including the Elimination of Nuclear Weapons (2005)*

This Decree No. 5484, adopted on 20 June 2005 and published in the Official Journal on 1 July 2005, aims to approve the national defence policy, including the elimination of nuclear weapons. Brazil, with a view to maintaining international peace and security and as a signatory of the Treaty on the Non-Proliferation of Nuclear Weapons – NPT, adopted this decree in implementation of Article VI of the Treaty which provides that “each of the Parties to the Treaty undertakes to pursue negotiations in good faith on effective measures relating to cessation of the nuclear arms race at an early date and to nuclear disarmament, and on a Treaty on general and complete disarmament under strict and effective international control.”

## **Finland**

### ***Third party liability***

#### *Nuclear Liability Bill (2005)*

The Nuclear Liability Bill was passed by the Finnish parliament in early June 2005 and was enacted by the president a few weeks later. The Nuclear Liability Act as amended will enter into force at a later date as determined by government decree. It will be published in a future Supplement to the *Nuclear Law Bulletin*.

The purpose of this bill is to amend the 1972 Nuclear Liability Act as amended (see previous *Nuclear Law Bulletins* on this subject; the text of the act as amended in 1989 is reproduced in the Supplement to NLB No. 44). The principal modifications are as follows:

- Finnish nuclear operators will require insurance coverage for a minimum amount of EUR 700 million; the liability of Finnish operators shall be unlimited in instances where the third tier of the Brussels Supplementary Convention (providing cover up to EUR 1.5 billion) has been exhausted and there remains damage to be compensated;
- the Council of State may decide on a lower amount of liability with regard to the transport of nuclear substances; however this amount may not be less than EUR 80 million. No other reduced liability amounts shall be applicable;
- nuclear damage shall be defined as per amended Article 1 of the revised Paris Convention;\*
- Nuclear damage caused by acts of terrorism shall be covered by this legislation.

## **France**

### ***Radiation protection***

#### *Order on Professional Activities Using Raw Materials Containing Natural Radionuclides not Used for Their Radioactive Properties (2005)*

This order, adopted on 25 May 2005 and published in the Official Journal on 1 June 2005, establishes a list of professional activities using raw materials naturally containing radionuclides not used for their radioactive properties (the list can be found in Annex 1). Operators of installations concerned are required to provide the General Directorate for Nuclear Safety and Radiation Protection (*Direction générale de la sûreté nucléaire et de la radioprotection* – DGSNR) with a study measuring natural ionising radiation exposure and estimating the public doses arising from the activities of these installations. Technical requirements for this analysis are set out in Annex 2 of the order.

The director of an installation carrying out an activity or category of professional activity as listed in Annex 1 is required to carry out a study of doses to which workers are exposed. The technical requirements for evaluating these doses are set out in Annex 3 of the order. This dose evaluation shall

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\* The text of the Paris Convention as last amended in 2004 is reproduced in the Supplement to NLB No. 75.

be sent to the Institute for Radiation Protection and Nuclear Safety (*Institut de radioprotection et de sûreté nucléaire – IRSN*).

*Decree on Radiological Emergency Situations, Replacing Certain Provisions of the Public Health Code (2005)*

Decree No. 2005-1179, adopted on 13 September 2005, modifies the provisions of the Public Health Code on radiological emergency situations. A radiological emergency situation is defined as an event which may lead to a release of radioactive materials or a level of radioactivity that may be hazardous to public health, in particular with regard to the dose limits and intervention levels established pursuant to Articles R. 1333-8 and R. 1333-80. The decree specifies that such an event may result from:

- an incident or accident caused by a nuclear activity as defined in Article L. 1333-1, including the transport of radioactive substances;
- a malevolent act;
- environmental contamination detected by the network to measure radioactivity in the environment;
- environmental contamination brought to the attention of the competent authority as defined in an international convention or agreement, or decision of the European Community, concerning information and radiological emergency.

The prefect is in charge of informing the general public of the radiological emergency situation, the manner in which they should react and the applicable health protection measures. A joint order of the Ministers for Health, the Interior and Public Safety provides instructions on the information of the public and the frequency of messages.

The decree also establishes which measures are to be taken by the prefect in the event of prolonged public exposure to ionising radiation.

*Interministerial Order on the Application of the Convention on Early Notification of a Nuclear Accident and on the EU Council Decision on Community Arrangements for the Early Exchange of Information in the Event of a Radiological Emergency (2005)*

This order, adopted on 30 May 2005, designates the competent national authorities and points of contact which are responsible for its application and implementation, in particular with regard to the preparation and issue of messages to other states, the IAEA and the European Commission.

The national point of contact is the Ministry for Foreign Affairs, which operates a permanent contact centre (department for diplomatic transmissions) for this purpose. The General Directorate for Nuclear Safety and Radiation Protection (*Direction générale de la sûreté nucléaire et de la radioprotection – DGSNR*), and the delegate for the nuclear safety and radiation protection of defence-related activities and installations (*délégué à la sûreté nucléaire et à la radioprotection pour les activités et installations intéressant la défense – DNSD*) are the competent national authorities.

Upon receipt from an EU Member State, a Party to the IAEA Convention or international bodies of a notification, pursuant to the IAEA Convention and/or the Council decision, concerning an

incident having taken place abroad, the national point of contact is required to immediately transfer this information to the DGSNR for action and the prime minister for information.

When an “incident”, as defined by the Interministerial Order of 7 April 2005 on the Action of the Public Authorities in the Event of an Incident Resulting in a Radiological Emergency Situation (see *Nuclear Law Bulletin* No. 75), occurs on national territory, the relevant competent national authority verifies the applicability of the IAEA Convention and the EU Council decision respectively, according to the information provided by the operator and the director of the emergency relief operations.

Should these international commitments, or one of the two, apply to the incident, the competent national authority:

- promptly notifies (or informs, accordingly) the relevant international entity/ies and states which may be affected of the incident, its characteristics, time of occurrence, location and measures carried out to protect the public when applicable. When the incident is under the responsibility of the DNSD, the Minister for Defence or Minister for Industry (depending on the case) must be informed prior to that notification;
- promptly provides affected states with any relevant information to minimise radiation hazards;
- provides the prime minister, the relevant ministers, the other competent national authority and the national point of contact with a copy of the notifications and information sent.

If the incident occurs abroad, the DGSNR shall judge the nature of the risk to the public and the environment and, if necessary, notifies immediately the national emergency management authorities.

The provisions set forth in this order do not affect the competences of the Interministerial Operational Centre for Crisis Management which, under the responsibility of the Minister for the Interior, serves as the contact point for the European Commission’s Monitoring and Information Centre.

### ***Environmental protection***

*Order on the Organisation of a National Network to Measure Radioactivity in the Environment and on Criteria for the Certification of Laboratories (2005)*

This order, adopted on 27 June 2005, repeals and replaces the Order of 17 October 2003 on the same subject (see *Nuclear Law Bulletin* Nos. 73 and 74).

Adopted pursuant to Article R. 1333-11 of the Public Health Code, it defines:

- the organisation of the national network to measure radioactivity in the environment;
- the criteria to be satisfied by laboratories certified to measure radioactivity in the environment.

The main change brought about by the Order of 27 June 2005 as compared to the Order of 17 October 2003 is that it defines the manner in which the results of measurements carried out by certified laboratories on the national network are notified. Thus, the operators or managers of sites on which nuclear activities are carried out, or local governments, state services and public bodies that

measure radioactivity in the environment pursuant to legislative or regulatory requirements, must have their measurements carried out by certified laboratories and notify the results to the Institute for Radiation Protection and Nuclear Safety (*Institut de radioprotection et de sûreté nucléaire – IRSN*) to be posted on the national network to measure radioactivity in the environment.

Local governments, state services and public bodies that, outside legislative or regulatory requirements and not in their capacity as operator or manager of a nuclear site, measure radioactivity in the environment using certified laboratories, are also required to notify the results to the IRSN.

The information which must be notified along with the measurements is specified in Annex 4 of this order.

## Germany

### *Radiation protection*

#### *Act on the Control of High-activity Sources (2005)*

With the adoption of the Act on the Control of High-Activity Sources on 12 August 2005 [*Bundesgesetzblatt* 2005 I, p. 2365; corr. 2005 I, p. 2976], Germany has implemented EU Council Directive 2003/122/Euratom of 22 December 2003 on the Control of High-Activity Sealed Sources and Orphan Sources [O.J. EU No. L 346 p. 57]. The implementation of this directive at national level entailed a number of amendments to the relevant legislation [Articles 1 to 4 of the act]:

- The Atomic Energy Act in its version of 1985 as last amended on 6 January 2004 [*Bundesgesetzblatt* 2004 I, p. 2]\* – Sections 1, 23, 46, 54 – was amended, and a new Section 12d was introduced, obliging the Federal Radiation Protection Office to establish a register of high-activity sources.
- Amendments to the Radiation Protection Ordinance of 20 July 2001 as last amended on 18 June 2002 [*Bundesgesetzblatt* 2001 I, p. 1714, 2002 I, p. 1459, 1869] include changes to the transportation provisions [Section 17], and to the import, export and transit provisions [Sections 19 et seq.]. Disused high-activity sources are to be returned to the producer or any other licence holder [Section 69, paragraph 5], and there is a corresponding obligation to take back the sources [Section 69a]. Details of the register of high-activity sources are set out in Sections 70a et seq. The Annexes to the ordinance are partly redrafted.
- Amendments to the Financial Security Ordinance of 25 January 1977 as last amended on 18 June 2002 [*Bundesgesetzblatt* 1977 I, p. 220, 2002 I, p. 1869] include additional provisions dealing with financial security for high-activity sources [Sections 8 paragraph 1 and 20 sentence 2] and a modification of the table in Annex 2.
- The Ordinance on the Shipment of Radioactive Waste of 27 July 1998 as last amended on 20 July 2001 [*Bundesgesetzblatt* 1998 I, p. 1918, 2001 I, p. 1714] contains a new Section 1, Sentence 2 providing that it shall not apply to high-activity sources which are not used any longer or those which shall not be used in the future and are to be returned to the producer.

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\* The text of this act including amendments up to and including the amendment of 22 April 2002 was published in the Supplement to NLB No. 70.

The Act on the Control of High-Activity Sources entered into force in two steps pursuant to its Article 6: The act and its Article 1 (amendments to the Atomic Energy Act) entered into force on 18 August 2005; the amendments to the ordinances contained in Articles 2 to 4 entered into force on 19 August 2005.

### ***Transport of radioactive materials***

#### *Ordinance on the Transportation of Dangerous Goods by Road and Rail (2005)*

On 3 January 2005, a consolidated version of the Ordinance on the Transportation of Dangerous Goods by Road and Rail was published in *Bundesgesetzblatt* 2005 I, p. 36. The new version replaces the 2003 version as amended (see *Nuclear Law Bulletin* No. 73). It incorporates a number of amendments to the 2003 version [*Bundesgesetzblatt* 2003 I, p. 2286, 2004 I, pp. 454, 485, 3711] and in particular, modifications introduced by the 2<sup>nd</sup> Amendment Ordinance of 3 January 2005 [*Bundesgesetzblatt* 2005 I, p. 5]. That ordinance aims at implementing a number of EU directives, namely Commission Directive 2004/89/EC of 13 September 2004 [O. J. EU No. L 293 p. 14], Commission Directive 2004/110/EC of 9 December 2004 [O. J. EU No. L 365 p. 24], and Commission Directive 2004/111/EC of 9 December 2004 [O. J. EU No. L 365 p. 25]. The objective of all these directives is to adjust the legislation of EU Member States to technical progress in the field of the transportation of dangerous goods by road and rail.

### ***Radioactive waste management***

#### *Ordinance on Establishing a Prohibition to Alter the Conditions of the Subsoil Within the Gorleben Salt Formation (2005)*

An Ordinance of 25 July 2005 on Establishing a Prohibition to Alter the Conditions of the Subsoil within the Gorleben Salt Formation with a View to Securing Site Exploration for a Final Repository for Nuclear Waste was published in the *Bundesanzeiger* of 16 August 2005 No. 153a.

In order to secure exploration of this site, the ordinance establishes a land planning area in the region of Gorleben [Section 1]. In certain parts of that region, as defined in Section 1 paragraph 2, any measures which may considerably hamper the site exploration are prohibited. This applies to the subsoil 50 metres and more below the surface. With regard to other parts of the land planning area not defined in Section 1 paragraph 2, the prohibition applies to the subsoil 100 metres and more below the surface. There is a legal presumption that any alteration undertaken in the defined depth is a considerable impediment of the site exploration. Section 9g of the Atomic Energy Act, which provides that compensation may be paid to the owner or usufructuary of the real estate, may be applicable.

The ordinance entered into force on 17 August 2005 and will expire ten years after that date.

## Hungary

### *Organisation and structure*

*Decree on the Procedures of the Hungarian Atomic Energy Authority in Nuclear Safety Regulatory Matters (2005)*

Government Decree No. 89/2005 (V.5) Korm.,\* which repeals and replaces Government Decree No. 108/1997 (VI.25) Korm. (see *Nuclear Law Bulletin* No. 60) as of June 2005, redefines the responsibilities of the Nuclear Safety Authority (NSA) of the Hungarian Atomic Energy Authority (HAEA).

This decree was substantially revised after lengthy negotiations to incorporate the most recent IAEA Safety Standards and to incorporate the findings of the IAEA Safety Review Mission.

The principal modifications are as follows:

- this decree shall apply to nuclear facilities, their related buildings, systems and equipment, and to activities related to nuclear facilities and parties involved in such activities. This includes, among others, the transport of radioactive materials within a facility, equipment for temporary storage of radioactive waste and physical protection equipment;
- it is now possible to issue a new licence for licensees wishing to extend the designed operating lifetime of units, provided a proper request is made to the NSA at least 4 years before the original licence's expiry date. The applicant must submit a programme of operations, which will then be supervised and inspected by the NSA;
- the NSA must issue a new licence in the event of legal succession concerning a former licensee;
- every time a unit is refuelled after general overhaul, the HAEA is required to issue a new licence;
- the licensee will not be held liable for ensuring the safety of the nuclear facility if that responsibility was assigned to another licensee, after the termination of his/her licence or after decommissioning of the nuclear facility;
- enhancement of safety culture is emphasised;
- applicants for a construction licence are required to submit a Preliminary Safety Report and applicants for a commissioning licence shall submit a Final Safety Report (which has to be updated on a yearly basis) to the NSA;
- the provisions of the decree are updated to ensure harmonisation with international emergency recommendations.

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\* In Hungarian, "Korm." is the abbreviation for "government".

## **Israel**

### ***Radiation protection***

#### *Amendment to the Pharmacists' Regulations (Radioactive Elements and Their Products) (2005)*

The amendment to the Pharmacists' Regulations (Radioactive Elements and their Products) 1980, entered into force on 20 February 2005.

The regulations cover the control of all aspects of ionising radiation by means of a licensing system. The production, import, purchase, usage and disposal of radioactive isotopes, radiation emitting devices, radioactive facilities, and products containing radioactive materials are governed by this instrument. The regulations are the responsibility of the Ministry of the Environment, and are supervised by both the Ministry of the Environment and the Ministry of Health, through their respective "chief radiation officers" appointed by the ministers.

The principal modifications to these regulations are as follows:

- criminal liability: non compliance with the regulations becomes a criminal offence;
- protection of the public in accordance with the IAEA Basic Safety Standards (BSS): licence conditions will ensure that members of the public will not be exposed to radiation exceeding the relevant radiation dose limits set forth in the IAEA's International Basic Safety Standards for Protection against Ionising Radiation and for the Safety of Radiation Sources;
- applications for licences: changes have been introduced as to the documentation the applicant must submit to the chief radiation officer.

### ***Nuclear trade***

#### *Import and Export Order (Control of Chemical, Biological and Nuclear Exports) (2004)*

The Import and Export Order (Control of Chemical, Biological and Nuclear Exports), 2004, entered into force on 1 July 2004. The order deals, *inter alia*, with export controls in the nuclear field, and it aims to assist in maintaining peace and stability and in preventing terrorism and the proliferation of non-conventional weapons.

The order makes punishable by law the export of goods, technology or services, with the knowledge that they are intended for use in the development or production of nuclear weapons. It comprises lists of source materials and dual-use materials which are subject to export control. The lists are based on those established by international regimes and conventions in the nuclear field. Export of such goods, technology or services is prohibited unless a licence is granted by the Ministry of Industry, Trade and Labour.

## Republic of Korea

### *Regime of radioactive materials*

#### *Act on Physical Protection and Radiological Emergency (2004)*

This act was adopted on 15 May 2003 and brought into force by Presidential Decree No. 18341 of 29 March 2004 and by Ordinance of the Ministry of Science and Technology (MOST) No. 55 of 20 May 2004. It aims to enhance nuclear security and emergency preparedness in nuclear facilities. The act is divided into two main parts dealing respectively with the physical protection of nuclear materials and civilian nuclear facilities, and radiological disaster management measures.

The first part of the act provides that the government shall assess on a regular basis threats against nuclear facilities and shall establish a physical protection system. A Physical Protection Council of Nuclear Facilities will be established under the supervision of the MOST. It will be responsible *inter alia* for national physical protection policies, establishment and evaluation of the physical protection system and co-operation among institutions concerned for the implementation of that system. Local protection councils are also established pursuant to the act.

Physical protection policies include protection against illicit trafficking of nuclear materials, measures to find and retrieve lost or stolen nuclear materials, prevention of sabotage of nuclear facilities and measures to address any radiological impact resulting from the sabotage of nuclear facilities. Nuclear materials subject to physical protection are classified as Grade I, II or III according to the degree of potential risk. The act sets out the responsibilities of nuclear licensees as regards physical protection and the role of the MOST in relation to inspections.

As regard the second part of the act dealing with radiological disaster management measures, it refers to the obligations of Korea under the Convention on Early Notification of a Nuclear Accident and the Convention on Assistance in the Case of a Nuclear Accident or Radiological Emergency. It differentiates between three different types of emergencies: alert, site area emergency and general emergency. The MOST is in charge of the preparation of a national radiological emergency plan which will be submitted to the prime minister and the Central Safety Committee and then be communicated to the competent authorities at local and regional level. Heads of local government shall establish local radiological emergency plans.

The act also sets out the obligations of nuclear licensees in relation to the establishment of a radiological emergency plan and its approval by the MOST, submission of reports in relation to its establishment and implementation, disaster prevention and management measures, and disclosure of information.

A National Emergency Management Committee will be set up and headed by the MOST. It will be responsible for any urgent action to adopt in relation to radiological emergency management. This committee will be composed of the deputy ministers of various ministries and representatives of central administrative agencies. Local emergency management centers shall also be established. Provision is made for the organisation of radiological emergency exercises and the establishment of a national radiological emergency medical system.

## **Poland**

### ***Radiation protection***

#### *Regulation on Ionising Radiation Dose Limits (2005)*

This regulation, adopted by the Council of Ministers on 18 January 2005, defines the dose limits for certain categories of radiation workers and for the public. It repeals and replaces the former regulation of 28 May 2002 of the same name.

Dose limits for workers expressed in terms of effective doses are equal to 20 mSv per calendar year, with a maximum of 50 mSv in any one given calendar year and a maximum of 100 mSv in five consecutive calendar years. Equivalent doses are established for specific parts of the body. Exceptions apply for pregnant women and nursing mothers, students, apprentices and trainees.

Dose limits for members of the public expressed in terms of effective dose shall be equal to 1 mSv per calendar year. Again, equivalent doses are established for specific parts of the body.

The regulation sets out details on how such doses are to be measured and calculated, in particular when taking into account the values of natural background radiation or other exposures. The use of dose measurements from available reference groups is required for determining doses to members of the public.

An annex sets out quantities and values of indices enabling the determination of doses used for exposure assessment.

#### *Regulation on Positions for Ensuring Nuclear Safety and Radiological Protection and on Radiological Protection Inspectors (2005)*

This regulation, adopted by the Council of Ministers on 18 January 2005, sets out various requirements for personnel responsible for nuclear safety and radiological protection within nuclear installations, and also for radiological protection inspectors. It repeals and replaces the former regulation of 6 August 2002 of the same name.

It specifies the required qualifications and qualities necessary for each post concerned, covering a wide spectrum of issues including physical and mental health, education and work experience, examination requirements and training.

## **Portugal**

### ***Organisation and structure***

#### *Decree-Law Setting up the Independent Commission for Radiological Protection and Nuclear Safety (2005)*

Decree-Law No. 139/2005, adopted on 17 August 2005, repeals and replaces Decree-Law No. 311/98, adopted on 14 October 1998 (see *Nuclear Law Bulletin* No. 63). This decree establishes an Independent Commission for Radiological Protection and Nuclear Safety (ICRPNS), replacing the old commission of the same name.

The ICRPNS is an independent technical entity responsible for supervising the different bodies involved in radiation protection and nuclear safety. It is comprised of five *pro bono* members appointed by the prime minister, to whom it reports.

The new Commission inherits the responsibilities of its predecessor, namely:

- drafting bills and regulations in the fields of environment, health, science and technology;
- verifying compliance with licences for the storage, production or transport of radioactive material and equipment, and for the operation of nuclear installations generating radioactive residues or nuclear waste;
- guaranteeing compliance with international standards on radiological protection and nuclear safety;
- co-operating with foreign bodies and international organisations working in this field;
- assisting in the preparation of national radiological and nuclear emergency plans.

It is also given the following new tasks:

- verifying and evaluating the conditions for the application of inspection and control legislation;
- issuing recommendations to the competent bodies on inspections, monitoring measures and all other necessary means to guarantee the protection of workers and the general public against nuclear and radiological risks;
- validating data to be notified to European or international institutions (with the exception of data in relation to radiological emergencies).

### ***Environmental protection***

#### *Decree-Law Establishing the Environmental Monitoring System of Radioactivity (2005)*

Decree-Law No. 138/2005, adopted on 17 August 2005 in implementation of Articles 35 and 36 of the Euratom Treaty, establishes the environmental monitoring system of the level of radioactivity in the air, water and soil; and sets up the national control network. The decree entered into force on 18 August 2005.

The decree provides that the Nuclear and Technological Institute shall be responsible for monitoring levels of radioactivity in the air, water and soil, and shall carry out samples as necessary. It shall also inform the European Commission of the results of its monitoring in accordance with requirements set out in this decree.

## Romania

### *Radiation protection*

#### *Order on Methodological Norms Regarding Planning, Organisation and Intervention in the Event of a Nuclear Accident or Radiological Emergency (2005)*

This Order No. 684 was adopted by the Minister of Public Administration and the Interior and was published in the Official Gazette of Romania Part I, No. 485 on 8 June 2005. These norms shall apply in the following circumstances:

- industrial, medical, traffic or fire occurrences involving radioactive sources; accidental discharges of, loss of or illicit trafficking in radioactive sources;
- accidents involving foreign nuclear installations, including nuclear-powered ships, which have transboundary effects;
- re-entry into the atmosphere of satellites with nuclear generators or other radiation sources aboard;
- accidents involving nuclear weapons;
- threats of terrorist attacks involving nuclear or radioactive devices;
- accidents involving national nuclear installations other than nuclear reactors.

The norms establish the responsibilities of central and local authorities, as well as nuclear licence-holders, in relation to the drafting of emergency plans.

#### *Order Approving Generic Procedures for Data Collection, Validation and Response During a Radiological Emergency (2005)*

Order No. 683 was issued on 7 June 2005 by the Minister of Public Administration and the Interior and published in Official Gazette Part I, No. 520 on 20 June 2005.

The procedures are designed as a handbook for central and local authorities and for licence-holders on their responsibility to protect the general public and workers during a radiological emergency in accordance with international recommendations. They include requirements on the following:

- limitation of risk and the after-effects of accidents;
- prevention of harmful effects (immediate or future) to public health by taking appropriate measures before or shortly after the exposure and maintaining the individual exposure for the general public or personnel below the accepted limits;
- reducing the risk of delayed effects upon human health by implementing protective measures in accordance with the IAEA recommendations and by maintaining the exposure of the intervention personnel below the accepted limits.

## ***Environmental protection***

### *Order on the Norms Regarding the Release of Radioactive Effluents into the Environment (2005)*

Order No. 221, issued on 25 August 2005 by the chairman of the National Commission for Nuclear Activities Control (CNCAN) and published in Official Gazette Part I, No. 280 on 9 September 2005, sets out principles and general requirements regarding the release of liquid and gaseous radioactive effluents into the environment.

The norms are applicable to all procedures that, during normal operations, involve the release of liquid or gaseous radioactive substances – in limited quantities and concentrations – into the environment. In particular, they apply to procedures involving nuclear power plants, research reactors, radioactive waste treatment and conditioning facilities, mining and processing of uranium and thorium ores, processing of nuclear raw materials and production of nuclear fuel, as well as medical, industrial and research procedures involving the release of radioactive effluents.

## **Slovenia**

### ***Radiation protection***

#### *Regulation on Requirements for Workers in Nuclear Installations and Radiation Facilities (2005)*

This regulation was adopted on 17 June 2005 [Official Gazette RS 74/05]. It determines the positions and tasks for which workers involved in nuclear safety operations must fulfil certain requirements and defines in detail such requirements (professional qualifications, psychological and physical examination etc.). It also sets out methods for the examination of the fulfilment of these requirements, including establishment of a commission for this purpose.

### ***Regime of radioactive materials***

#### *Regulations on Physical Protection of Nuclear Materials, Nuclear Installations and Radiation Facilities (2005)*

These regulations were adopted on 15 March 2005 [Official Gazette RS 31/05]. They establish a classification of nuclear materials, nuclear installations and radiation facilities (with radiation sources of significant activity) in relation to possible consequences of criminal acts. They also set out the appropriate degree of physical protection measures applicable to each category, and also for nuclear materials in transit. A regulation was also adopted on 15 March 2005 on the working conditions of physical protection workers.

## South Africa

### *Recent regulatory developments in the nuclear field in South Africa\**

In South Africa, nuclear activities are regulated by the National Nuclear Regulator Act of 1999 (Act No. 47 of 1999; see *Nuclear Law Bulletin* No. 65), which was established to provide for, *inter alia*, safety standards and regulatory practices for the protection of persons, property and the environment against nuclear damage. This information note will focus on the recent regulations issued under the National Nuclear Regulator Act; and in particular the regulations requiring a nuclear installation licence holder to establish a Public Safety Information Forum.

#### *Introduction*

Prior to the advent of the National Nuclear Regulator Act of 1999 (hereinafter referred to as the NNR Act), the Nuclear Energy Act of 1993 (Act No. 131 of 1993; see *Nuclear Law Bulletin* No. 53) provided for the continuation of the Atomic Energy Corporation and the Council for Nuclear Safety established by Sections 2 and 24, respectively, of the Nuclear Energy Act of 1982 (Act No. 92 of 1982; see *Nuclear Law Bulletin* No. 35).

The 1993 Nuclear Energy Act repealed the 1982 Act. The objectives of the Atomic Energy Corporation were, amongst others, to develop and promote the development of nuclear technology and related expertise in the field of nuclear energy. On the other hand, the objectives of the Council for Nuclear Safety under that same legislation were, with a view to the safeguarding of persons against nuclear damage, to regulate and exercise control, through the issue of nuclear licences, over certain activities. The 1993 Act covered both the promoter and the regulator of nuclear energy in one piece of legislation. This position was undesirable.

The NNR Act came into effect on 24 February 2000. Section 54(1) of the NNR Act repealed the provisions of the 1993 Nuclear Energy Act relating to the Council for Nuclear Safety.<sup>1</sup>

The NNR Act established the National Nuclear Regulator [Section 3] to regulate nuclear activities. The objectives of the Regulator are, *inter alia*, to provide for the protection of persons, property and the environment against nuclear damage through the establishment of safety standards and regulatory practices [Section 5(a)]. One of the functions of the Regulator is to advise the Minister of Minerals and Energy (the Minister) on matters associated with any action or condition which is capable of causing nuclear damage; or on issues which the Minister refers to the Regulator or on which the Regulator thinks the Minister requires advice [Section 7(g)].

Chapter 3 of the NNR Act deals with nuclear licences and Section 26(4) in particular provides that the holder of a nuclear installation licence must establish a public safety information forum.

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\* This information note was kindly provided by Mr. Nathan Gift Nhlapho, Legal Adviser of the National Nuclear Regulator in South Africa. The author alone is responsible for the facts mentioned and opinions expressed herein.

1. Chapters V (Council for Nuclear Safety), VI (Licensing of Nuclear Activities), section 1, insofar as it relates to anything in any of these chapters; and the provisions of Chapter VII, in so far as they relate to the Council for Nuclear Safety).

Chapter 5 of the NNR Act relates to Safety and Emergency Measures. Section 36 states that the Minister must, on the recommendation of the Board of Directors of the Regulator (the Board), make regulations regarding safety standards and regulatory practices. Before any such regulations are made the Minister must, by notice in the *Gazette*, invite the public to comment on the proposed regulations and shall then consider that comment [Sections 36(1) and (2)].

Section 38 of this chapter provides for emergency planning and subsection (4) thereof provides that the Minister may, on the recommendation of the Board and in consultation with the relevant municipalities, make regulations on the development surrounding any nuclear installation to ensure the effective implementation of any applicable emergency plan.

Section 47(1) provides that the Minister may, after consultation with the Board and by notice in the *Gazette*, make regulations on any matter required or permitted to be prescribed in terms of the NNR Act and/or as necessary for the effective administration of the NNR Act [Section 47(1)(a) and (b)]. Section 47(2) provides that any regulation made pursuant to Section 47(1) may provide that any failure to comply therewith is an offence punishable with a prescribed fine or term of imprisonment. Section 47(3) provides that before any regulations are made pursuant to Section 47(1), the Minister must, by notice in the *Gazette*, invite comment on the proposed regulations and shall then consider that comment.

This paper shall focus in particular on two regulations in force, on the public safety information forum and on the development surrounding any nuclear installation.

#### *Public Safety Information Forum (PSIF)*

Section 26 of the NNR Act provides for the responsibilities of nuclear installation licence-holders. Section 26(4) provides that the holder of a nuclear installation licence must establish a public safety information forum as prescribed in order to inform persons living in the municipal area in respect of which an emergency plan has been established pursuant to Section 38(1) of the act on nuclear safety and radiation safety matters.

Pursuant to Section 47 of the NNR Act the Minister, after consultation with the Board, published regulations on the establishment of such PSIFs. These regulations were published in *Government Gazette* No. 26112 of 12 March 2004.

Regulation 3 provides that nuclear installation licence-holders are required to:

- establish a public safety information forum pursuant to Section 26(4);
- provide a venue and facilities for meetings of the forum;
- provide a secretariat to facilitate the proper functioning of the forum;
- provide information to the forum, with due regard to Section 51 of the act, on nuclear/radiation safety matters, including but not limited to nuclear incidents/accidents; and
- cover the costs related to the establishment and management of the forum.

Regulation 4 provides for the manner in which the PSIF shall operate. A Chairperson and Deputy Chairperson must be elected by open ballot from the members of the public living in the relevant municipal area, and shall perform their duties without payment. Further provisions sets out

obligations in respect of the regularity of meetings, advance notice of date, time, and venue, record-taking at those meetings and invitations to various bodies.

### *Development surrounding Nuclear Installations*

Section 38(4) of the NNR Act provides that the Minister may, on the recommendation of the Board and in consultation with the relevant municipalities, make regulations on the development surrounding any nuclear installation to ensure the effective implementation of any applicable emergency plan.

On 5 March 2004 the Minister, pursuant to Section 38(4) read in conjunction with Section 47 of the NNR Act, published regulations in the *Government Gazette* No. 26121 on the development surrounding any nuclear installation to ensure the effective implementation of any nuclear emergency plan (the Development Regulations).

Regulation 3 obliges the Regulator to lay down specific requirements regarding development surrounding a nuclear installation. This regulation provides that the Regulator shall lay down, where appropriate, specific requirements relating to the control and/or monitoring of development within the formal emergency planning zone surrounding a specific nuclear installation, after consultation with the relevant provincial and/or municipal authorities.

Regulation 2 defines “relevant provincial and/or municipal authorities” to mean any province and/or municipality with responsibilities for development and/or disaster management, as the case may be, in the area within which the formal emergency planning zone of a nuclear installation, as defined by the Regulator, falls.

The Development Regulations impose certain responsibilities on relevant provincial and/or municipal authorities. Regulation 4 provides that these authorities must:

- develop and implement processes, based on the requirements pursuant to Section 3, including associated acceptance criteria, to conduct periodic assessment of:
  - current and planned population development;
  - disaster management infrastructure; and
  - new development;to ensure that the emergency plan, as set out in Section 38 of the act, can be implemented effectively at all times;
- document the processes contemplated in subsection 4(a) in procedures established by the Regulator; and
- report to the Regulator on the implementation and the results of the monitoring processes at intervals acceptable to the Regulator.

Regulation 2 defines “disaster management infrastructure” to mean all infrastructure and services necessary for the implementation of an emergency plan, including but not limited to public communication, transport, personnel, mass care and medical care.

Regulation 5 provides that failure to comply with these regulations shall constitute a criminal offence as set out in Section 52 (2) of the act.

## **Sweden**

### ***Regime of nuclear installations***

#### *SKI Regulations on Physical Protection of Nuclear Facilities (2005)*

New SKI Regulations on Physical Protection of Nuclear Facilities [SKIFS 2005:1], adopted by the Swedish Nuclear Power Inspectorate (SKI) Board on 24 August 2005, complement the 2004 SKI Regulations on Safety in Nuclear Facilities (see *Nuclear Law Bulletin* No. 74) and replace certain licensing provisions concerning physical protection of nuclear facilities.

Partly due to the increased threat of large-scale terrorism since 11 September 2001, the regulations are based on the existence of new and aggravated threats in relation to hazardous facilities, requiring them to abide by stricter measures in order to protect themselves against aggressors. The regulations are also in conformity with international recommendations and the amended Convention on the Physical Protection of Nuclear Material.

The regulations concern all licensed nuclear facilities, such as nuclear power plants, fuel fabrication facilities, research reactors, facilities for the storage or handling of nuclear material or nuclear waste and facilities for interim storage or final repository of spent nuclear fuel. Facilities are classified into one of three categories, where category one is considered the most sensitive and has the most far-reaching requirements (e.g. nuclear power plants and facilities for interim storage of spent nuclear fuel).

These regulations contain provisions on all aspects of physical protection, including requirements and definitions on perimeter and protected area, increased demands on vehicle barriers, detection and verification, security screening of persons and vehicles, central alarm station and central control room, IT-security and protection of information on safety and security measures in general.

Most of these new regulations will enter into force in January 2007, although those setting out requirements in relation to more extensive measures, e.g. construction of new buildings and change of infrastructure on site, will enter into force in January and October 2008.

### ***Radioactive waste management***

#### *Guidance for Geological Disposal of Nuclear Waste (2005)*

Decision SSI FS 2005:5, adopted on 5 September 2005 and containing Guidance for Geological Disposal of Nuclear Waste in Sweden, was issued by the Swedish Radiation Protection Authority (SSI) in implementation of SSI's 1998 Regulations on the protection of human health and the environment in connection with the final management of spent nuclear fuel and radioactive waste. As the radiation protection regulations provide the ultimate standard for final disposal of nuclear waste in Sweden, this guidance will be an important basis for current and future licence applications.

In the guidance, SSI develops important aspects for complying with the regulations, including best available technique (BAT), optimisation, risk limit and risk analysis.

### *BAT and Optimisation*

In order to comply with SSI regulations, the licence-holder should take into consideration possible means of improving the expected performance of the repository system. Optimisation and BAT are two tools to evaluate this and should be used in parallel. Optimisation is defined as a tool to minimise risk based on the results of risk calculations. BAT focuses on the basic barrier functions of the repository system, aiming to hinder, reduce and delay releases of radioactive substances from both the engineered and the geological barriers. This means that, at every step during siting, design, construction and operation of the repository system, the licence-holder should aim for the best possible solution.

### *Criteria for the Protection of Human Health and the Environment*

SSI's regulations state that the annual risk of lethal or harmful effects should not exceed  $10^{-6}$  for a representative individual in the group exposed to the greatest risk. In the guidance, SSI presents different ways to show compliance with this risk criterion, depending on the size of the exposed group and exposure pathways.

The fact that the human health criterion is expressed in the form of an annual risk implies that both the probability and the consequences of potential future radiological exposures from the repository have to be taken into account. SSI's guidance does not, however, require a strict probabilistic approach to the risk analysis: both deterministic and probabilistic methods, or combinations of the two, may be used.

The safety case should also include an evaluation of possible effects to the environment. Calculations of concentrations of radioactive substances in the environment can provide a basis for such an evaluation.

## **Switzerland**

### *Third party liability*

#### *Draft Act on Nuclear Third Party Liability (2005)\**

Following the adoption of the new Federal Act on Nuclear Energy (see *Nuclear Law Bulletin* No. 75), which entered into force on 1 February 2005, the Federal Council instructed the Federal Department of the Environment, Transport, Energy and Communications (DETEC) to prepare a draft amending act on nuclear third party liability to implement the Paris and Brussels Supplementary Conventions as amended by their Amending Protocols of 12 February 2004.

On 29 June 2005, the Federal Council decided to open a consultation procedure on this act, which continued until 31 October 2005.

The draft amending act aims to provide improved protection to victims of nuclear damage in two different ways. First, the draft increases the cover for nuclear damage to CHF 1 billion

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\* This information note was kindly submitted by Mr. Patrick Cudré-Mauroux, legal adviser at the Swiss Federal Energy Office. The author alone is responsible for the facts mentioned and opinions expressed herein.

(EUR 700 million). Secondly, it allows the Swiss Confederation to ratify the Paris Convention and the Brussels Supplementary Convention, as amended, as well as the Joint Protocol of 1988 on the Application of the Vienna Convention and the Paris Convention (hereinafter referred to as the Joint Protocol).

The basic principle of the unlimited liability of the operator of a nuclear installation (strictest liability: in Swiss law, *responsabilité objective aggravée*) which is already in the current legislation (see *Nuclear Law Bulletin* No. 71; the text of the act is reproduced in the Supplement to NLB No. 32) has been retained in the amending act.

In order to provide increased protection to victims and to respect the international rules on the subject, the minimum amount of cover is established in the draft [Section 8(2)] at CHF 2.25 billion (EUR 1.5 billion) to which 10% should be added in respect of interest and costs, in comparison with CHF 1 billion currently available (EUR 700 million; Section 12 of the Act on Nuclear Third Party Liability).

This amount is broken down as follows: for damage which can be covered by private insurance, the operator of a nuclear installation must obtain cover of at least CHF 1 billion [plus 10% for interest and costs; Section 9(1) of the draft]. Private coverage can take the form of insurance or other financial guarantee, as long as the latter offers the same guarantees for persons having suffered damage. In the event that damage goes beyond the amount of private coverage, or if it is not available, or if it does not allow indemnification, the Confederation is obliged to cover the damage up to CHF 2.25 billion [plus 10% for interest and costs; Section 10 of the draft].

This is the same for risks excluded from private insurance, such as extraordinary natural phenomena, acts of war or claims which are time-barred. In these cases, only the Confederation cover will apply. Consequently, the Confederation has established a fund composed of contributions from nuclear installation operators in order to fulfil its obligations.

Furthermore, the amounts of CHF 1 billion and 2.25 billion (EUR 700 million and EUR 1.5 billion respectively) are in total conformity with those set out in the revised Paris Convention (EUR 700 million) and in the revised Brussels Supplementary Convention (EUR 1.2 billion, for the first two tiers under Article 3(b)(i) and (ii) of the BSC).

The draft amending act also amends the prescription periods and rules regarding the time-barring of claims. The Act on Third Party Liability currently in force only provides for one prescription period of 30 years, irrespective of the type of damage suffered [Section 10(1) of the Act on Third Party Liability]. Following the differentiation made in the Paris Convention between death and personal injury on the one hand, and other damage on the other, the difference is made as follows: where there is a 30-year prescription period for all damage, claims for death or personal injury shall take priority over claims for other damage when such claims are made over ten years after the nuclear incident. These rules give effect to Article 8 of the Paris Convention [in particular, Article 8(b) and (c)].

The consultation procedure having closed, remarks and requests for correction will be examined and the draft act will be amended consequently. When the draft act is finalised, it will be submitted to parliament, probably at the beginning of 2007. The parliament will then be required to vote on the amendment of the Act on Third Party Liability and on the ratification, by Switzerland, of the Paris Convention and the Brussels Supplementary Convention, along with the Joint Protocol.

The text of the draft act, along with its explanatory report, can be consulted (in French, German or Italian) on the Web site of the Federal Energy Office at the following address: [www.energie.schweiz.ch/internet/00529/](http://www.energie.schweiz.ch/internet/00529/)

## **Ukraine**

### ***Regime of nuclear installations***

*Law on the Decision-making Procedure Applicable to the Siting, Design and Construction of Nuclear Installations and Radioactive Waste Management Facilities (2005)*

This law, adopted on 8 September 2005, sets out issues in relation to the form of decision-making on the siting, design and construction of nuclear installations and radioactive waste facilities, the reasons upon which such decisions can be based, public and local government involvement in discussions, and parliamentary review of such decisions.

The law applies to nuclear installations and radioactive waste management facilities considered to be of national importance, namely nuclear power plants and research reactors, nuclear heat supply plants, facilities for the storage or disposal of radioactive waste or spent fuel, and radioactive waste reprocessing facilities.

Decisions concerning siting, design and construction of such installations shall be made by the Ukrainian parliament with the agreement of local governments and executive authorities as regards their location. Decisions on location shall be based on the results of public referendum.

## **United States**

### ***General legislation***

*Energy Policy Act (2005)\**

On 8 August 2005, President Bush signed into law the Energy Policy Act of 2005 which includes “Nuclear Matters” at Title VI with provisions amending the Atomic Energy Act of 1954 (AEA) 42 U.S.C.<sup>1</sup> 2011 et seq. (see *Nuclear Law Bulletin* Nos. 7 and 14). This is the first national energy plan in the United States in more than a decade.<sup>2</sup> In summary of major aspects:

*Subtitle A – The Price-Anderson Act Amendment:*

- extends indemnification authority of the Nuclear Regulatory Commission and Secretary of Energy under the AEA until 31 December 2025; provides that the Department of Energy’s liability limit – above any required amount of financial protection – is

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\* This information note was kindly provided by Ms. Sophia Angelini, Attorney Adviser at the Office of Civilian Nuclear Programs of the US Department of Energy. The author alone is responsible for the facts mentioned and opinions expressed herein.

1. U.S.C. = United States Code.
2. See [www.whitehouse.gov/infocus/energy/](http://www.whitehouse.gov/infocus/energy/)

USD 10 billion, subject to adjustment for inflation, for each nuclear incident, including legal costs;

- increases the maximum indemnity provided by the Secretary in case of “nuclear incidents” outside the United States from USD 100 million to USD 500 million;
- clarifies the treatment of modular reactors as a single facility or multiple facilities - two or more facilities located at a single site, each having a rated capacity of 100 000 electrical kilowatts or more but not more than 300 000 electrical kilowatts, will be considered a single facility; and
- provides that, for contracts entered into as of 8 August 2005, total civil penalties for any Department contractor, subcontractor, or supplier may not exceed total fees paid within any one-year period.

Further details on the Price-Anderson amendments are provided below under the heading Third Party Liability.

*Subtitle B – General Nuclear Matters:*

- provides for Commission scholarship and fellowship programmes for students to pursue education in science, engineering, or other fields of study that the Commission determines is critical to its regulatory mission;
- permits the Commission to issue authorising licences for export of Highly Enriched Uranium (HEU) for medical isotope production; outlines requirements for granting a licence to a “recipient country” (Canada, Belgium, France, Germany, and the Netherlands) – including written assurance that the HEU will be used only for medical isotope production and that physical protection requirements are in place for transportation and storage; requires that the National Academy of Sciences conduct a feasibility study on medical isotope production to review, *inter alia*, the Department’s progress in eliminating use of HEU in reactor fuel, reactor targets, and medical isotope production facilities; and identifies the potential cost differential in medical isotope production based on the processing facility used (HEU vs. LEU);
- provides that the Secretary will establish two projects in regionally and climatically diverse regions to demonstrate commercial production of hydrogen at existing nuclear power plants;
- authorises the Secretary to enter into contracts for new plant investment protection in the form of standby support to offset the financial impact of delays beyond industry’s control that may occur during construction and during the initial phases of plant startup for the first six new reactors. The act provides for 100% coverage of the cost of delays for the first two new plants, up to USD 500 million each, and 50% of the cost of delays, up to USD 250 million each, for plants three through six. Covered delays include failure of the Commission to comply with schedules for review and approval of inspections or conduct of hearings; the Secretary is *not* obligated to cover any cost resulting from failure of the company to take any action required by law or regulation, or any events within the company’s control, or normal business risks.

*Subtitle C – Next Generation Nuclear Plant Project:*

The law authorises USD 1.25 billion for fiscal years 2006 to 2015 to fund a prototype Next Generation Nuclear Plant Project to produce both electricity and hydrogen and to be sited at the Idaho National Laboratory; the Secretary must seek international cooperation, participation and financial contributions and may contract for assistance from specialists or facilities from member countries of the Generation IV International Forum, the Russian Federation or other international partners if they provide access to cost-effective and relevant skills or test capabilities.

*Subtitle D – Nuclear Security:*

- includes a requirement that the NRC issue a rulemaking on its “design basis threat”, the range of threats against which nuclear plant security must defend;
- provides for periodic “force-on-force” drills by the NRC to help refine the ability to protect the plant from intruders, for nuclear power plants and fuel cycle facilities that handle highly enriched uranium;
- contains a requirement that the NRC assign an employee as a federal security coordinator in each region.

It also provides that the NRC will issue regulations prohibiting exporting or importing of a “radiation source”, as defined in the Code of Conduct on the Safety and Security of Radioactive Sources approved by the IAEA on 8 September 2003, unless the Commission determines, consistent with the Code of Conduct, that certain conditions are met by the recipient and recipient country. The Commission will also issue regulations establishing a mandatory tracking system for radiation sources in the United States, compatible to the maximum practicable, with the system established by the Secretary of Transportation. A violation will be punishable by a civil penalty of up to USD 1 million.

***Third party liability***

*Amendments to the Price-Anderson Act (2005) \**

As mentioned above, the Energy Policy Act of 2005 introduced amendments to the 1957 Price-Anderson Act which is an integral part of the Atomic Energy Act (AEA) (see previous editions of the *Nuclear Law Bulletin*; the text of the Price-Anderson Act as amended in 1988 is reproduced in the Supplement to NLB No. 42).

Subtitle A of the 2005 Energy Policy Act amends Sec. 170 of the AEA as follows:

- **Extension of Indemnification Authority:** Extends the indemnification authority under the AEA of: Commission licensees; Department contractors; and Nonprofit Educational Institutions to 31 December 2025. [Sec. 170c.; 170d.(1)(A); and 170k.];
- **Maximum Assessment:** Increases from USD 63 million to USD 95.8 million the maximum standard deferred premium that may be charged a licensee following any nuclear incident and increases from USD 10 million to USD 15 million the maximum amount payable by a licensee in any one year – as a retrospective premium following a nuclear incident – for each facility for which the licensee is required to maintain primary

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\* This information note was also kindly provided by Ms. Sophia Angelini.

financial protection. (Primary financial protection currently remains USD 300 million for facilities designed for producing substantial amounts of electricity and having a rated capacity of 100 000 electrical kilowatts or more.) [Sec. 170b.(1)];

- **Department Liability Limit:** Above any financial protection that the Secretary may require of a contractor to cover public liability, the Department's liability is limited to a total of USD 10 billion (subject to adjustment for inflation under subsection 170t.) for all persons indemnified in connection with the contract and for each nuclear incident, including legal costs of the contractor [Sec. 170d.(2)];
- **Contract Amendments:** All indemnification agreements are deemed amended as of enactment (8 August 2005) to reflect the Department's new USD 10 billion indemnity limit for public liability - above any financial protection required of the contractor [Sec. 170d.(3)];
- **Liability Limit:** The aggregate public liability for a single nuclear incident, including legal costs, shall not exceed in the case of contractors the USD 10 billion indemnity amount - above any required financial protection [Sec. 170e.(1)(B)];
- **Incidents Outside the United States:** Increases the maximum indemnity provided by the Secretary in case of a "nuclear incident" occurring outside the United States (involving US-owned source, special nuclear, or by-product material used by or under contract with the United States) from USD 100 million to USD 500 million [Sec. 170d.(5)];
- **Reports:** The Commission and Secretary must submit detailed reports to Congress by 21 December 2021 concerning continuation or modification of the act, taking into account the condition of the nuclear industry, availability of private insurance, and state of knowledge concerning nuclear safety at that time [Sec.170p.];
- **Inflation Adjustment:** The Commission must adjust the *total and annual* standard deferred premium under Sec. 170b.(1) not less than once during each 5-year period following 20 August 2003 in accordance with the aggregate percentage change in the Consumer Price Index [Sec. 170t.];
- **Treatment of Modular Reactors:** A new subsection provides that the Commission must consider as "a single facility having a rated capacity of 100 000 electrical kilowatts or more" any combination of two or more facilities located at a single site - each of which has a rated capacity of between 100 000 and 300 000 electrical kilowatts but not more than a combined rated capacity of 1 300 000 electrical kilowatts [Sec. 170b.(5)(A) and (B)];
- **Applicability:** Amendments as to the "Maximum Assessment" of USD 95.8 million (maximum standard premium that may be charged a licensee following any nuclear incident); the "Department Liability Limit" of USD 10 billion for a single nuclear incident, including legal costs; and the USD 500 million maximum indemnity by the Secretary in the case of "Nuclear Incidents Outside the United States" do not apply to an incident occurring before 8 August 2005;
- **Civil Penalties:** Repeals a requirement that the Secretary determine by rule whether nonprofit educational institutions receive automatic remission of penalties. For contracts entered into as of 8 August 2005, total civil penalties for any not-for-profit contractor, subcontractor, or supplier, may not exceed total fees paid within any one-year period [Sec. 234A b.(2)].