Contribution of the Commission services to question n° 1 of the questionnaire submitted on 13 September 2000 by the Presidency to the Atomic Questions Group in the framework of the mandate given to it by the Coreper on 26 July 2000

NON-PAPER (29/09/2000)

Part I: Inventory of the "non-binding EU acquis"[1] in the field of nuclear installation safety

Annex: Technical basis for "non binding EU acquis" on safety of nuclear installations

Part II: Commitments made in the field of nuclear safety by Bulgaria, the Czech Republic, Hungary, Lithuania, Romania, Slovakia and Slovenia

[1] Throughout this non-paper, the expression « non-binding EU acquis » should not be understood as having any legal meaning.

Part I: Inventory of the "non-binding EU acquis" in the field of nuclear installation safety

Introduction

On 26 July 2000, the Coreper gave a mandate to the Atomic Questions Group in order to define the relevant technical elements with a view to elaborate the position of the EU vis-à-vis a high level of nuclear safety in the candidate countries. During the Atomic Questions Group meeting of 13 September 2000, the Presidency asked the Commission to produce an inventory of the existing "acquis" on nuclear installation safety and of the commitments taken in this context by the candidate countries. The Group made clear that the Commission paper shall cover only the installation safety aspects of nuclear safety[2]. However, it should be remembered that other aspects of nuclear safety, in particular the management of spent fuel and radioactive waste, are also important issues.

Background

Nuclear installation[3] safety aims at protecting individuals, society and the environment from harm by establishing and maintaining in nuclear installations effective defences against radiological hazards[4]. Activities undertaken at Community level have contributed substantially to the pursuing of a high level of nuclear safety in the Member States, and towards the improvement of nuclear safety in the CEEC and in the NIS.

Basically, the safety of a nuclear installation is the responsibility of the operator under the control of its authorities in the framework of national legislation. No specific legislation on nuclear installation safety has been developed at EU level. There is however general Community legislation on environment that covers most nuclear installations: the Environmental Impact Assessment Directive[5]. An important body of Community legislation has been developed in the framework of Chapter III (Health and Safety) of the Euratom Treaty, establishing a legally binding, prescriptive radiation protection system, which ranges from authorisation of nuclear installations to emergency preparedness.

The fact that no EU legal "acquis" has been developed in the field of nuclear installation safety does not mean that national systems have nothing in common. A fundamental "non-binding acquis" exists as a result of a historic and economic dynamics based on voluntary co-operation between the main nuclear actors at EU level.

This process has led to the following situation:

[2] « Sûreté nucléaire » in French.

[3] Following the definition adopted by the Convention on Nuclear Safety: *"Nuclear installation means for each Contracting Party any land-based civil nuclear power plant under its jurisdiction including such storage, handling and treatment facilities for radioactive materials as are on the same site and are directly related to the operation of the nuclear power plant. Such a plant ceases to be a nuclear installation when all nuclear fuel elements have been removed permanently from the reactor core and have been stored safely in accordance with approved procedures, and a decommissioning programme has been agreed by the regulatory body."*

[4] « The safety of nuclear installations », Safety Series n° 110, p. 2, International Atomic Energy Agency, Vienna, 1993

[5] Council Directive 85/337/CEE of 27 June 1985; Council Directive 97/11/CEE of 3 March 1997

- the consequences of the electricity market deregulation push more and more the nuclear industry towards voluntary harmonisation, but economic pressure could also lead some companies to cut on safety-related investments, which are generally less visible than others, and where the consequences for cuts are not immediate;
- the requirement of a high level of nuclear safety for the candidate countries has launched a discussion at EU level on "essential elements of nuclear safety" to be commonly and clearly identified and on an evaluation system to be defined and implemented prior to the accession of the candidate countries;
- the climate change issue has revamped the public debate on nuclear power;
- public opinion constantly requires the highest possible level of nuclear safety and of information on it, because public awareness of the risks for human health and the environment linked to the operation of nuclear power plants (NPPs) has increased. The European Parliament in particular has been requesting "the Commission to propose legislation for establishing EU-wide high minimum standards for the safe and reliable design, construction and operation on nuclear and nuclear-related installations and for nuclear safety management systems, particularly in view of the practical, and possibly political, problems arising from the forthcoming accession of new Member States"[6].

Several different levels and types of activities have been developed in the EU context, with the involvement of EC expert groups, of Member State authorities, of non-EU countries and of the nuclear industry.

The characteristics of the existing "acquis" at EU level

All the EU Member States are Parties to the Convention on Nuclear Safety, which constitutes an internationally recognised common platform for nuclear safety development. EU Member States' national safety requirements are highly demanding. However, because of different historical backgrounds, legal framework, type and number of reactors and different approaches to regulation (of more or less prescriptive nature) common rules to be applied across the Community have not been sought. Moreover, any attempt to achieve a consensus on a set of common EU safety standards for presently operating nuclear installations would possibly result in a very generalised set of rules and principles, which would be unlikely to improve current nuclear reactor safety levels in the EU. Instead, a "non-binding acquis" at EU level has been developed on the basis of co-operation and voluntary harmonisation. It is built on fundamental common principles that form the basis of all the EU national nuclear safety regulations and stated in various internationally accepted documents, including the 25 Fundamental Principles of Nuclear Safety adopted through the IAEA[7]. The following are some of its more important aspects:

Accident prevention is the first safety priority and is the basis of the design and the operation of NPPs. This priority has led to the concept of defence-in-depth and of the satisfactory protection of the three vital safety functions: control of core power, fuel cooling and confinement of radioactivity.

The second fundamental principle of nuclear safety is the mitigation of accident consequences. This principle requires three kinds of provisions: accident management, off-site countermeasures and engineered safety features.

[6] European Parliament Resolution on falsification of data concerning MOX fuels at Sellafield, 18/05/2000
[7] « The safety of nuclear installations », Safety Series n° 110, Intarnational Atomic Energy Agency, Vienna, 1993

Another important principle is that nuclear installation safety is not a once-and-for-all result, but needs continuous checks and improvements: detailed safety reviews must therefore be performed for each NPP at regular intervals. These reviews must take into account the results of operating experience in the plant itself and in other relevant plants and be based both on deterministic and probabilistic evaluations. They must be subject to an independent verification.

Safety culture[8] is an important concept that must govern the actions and interactions of all individuals and all organisations engaged in nuclear activities; it is particularly important for NPP operating staff. Safety culture requires all duties important to safety to be carried out correctly, with alertness, due thought and full knowledge, sound judgement and a proper sense of accountability. It is worth noting that human error is the direct cause of nearly all nuclear incidents or accidents.

Within the national legislative and regulatory framework, the prime responsibility for safety rests with the operator. A regulatory body must be established by the government and be independent of any organisation in charge of the promotion of nuclear energy. In this context, the responsibilities of the operating organisation and of the regulatory body must be clearly defined.

These general principles are recognised as fundamental for all EU Member States national regulatory systems. The common objective is to reach a high, practically equivalent level of safety throughout the European Union, which supposes mutual recognition of approaches, methodologies, options and safety criteria applied in the different Member States.

Against the background of these principles, a "non-binding EU acquis" consisting in common practice and approaches, benchmarking, common positions and consensus has been developed for many specific aspects of nuclear safety. A technical description and a specific bibliography on this "non-binding acquis" are given in detail in the Annex.

It is important to underline that this "non-binding EU acquis" addresses legal, regulatory, design and operational aspects of nuclear installation safety. All the main actors in the nuclear field (regulators, operators, vendors, manufacturers, technical support organisations) have taken part in the process of its creation.

Harmonisation work at EU level has constituted a major input in IAEA Safety Standards and Guides. It is also being transferred, at least in part, to the candidate countries and – to a lesser extent – to the NIS, mainly through the mechanisms of EU assistance (see following section).

The main instruments

Different instruments have contributed to the creation and the development of the "non-binding EU acquis". A first set of instruments is the co-operation process promoted at Community level. A second group of instruments has been established in order to respond to the medium and long-term competitiveness challenges and needs of the Community's

[8] « Safety culture is that assembly of characteristics and attitudes in organisations and individuals which establishes that, as an overriding priority, nuclear plant safety issues receive the attention warranted by their significance", IAEA Safety Series No 75-INSAG 4

nuclear industry. A third group of instruments consists of the assistance mechanisms developed by the Member States and the Commission in order to improve nuclear safety levels in the candidate countries and in the NIS.

1. Instruments at EU level

In the 1950s, when the Euratom Treaty was negotiated and entered into force, there were no operating civil NPPs in the then MS. Nuclear installation safety was not an issue and it was not explicitly covered in the Euratom Treaty. For several years there was no Community activity directly dealing with nuclear installation safety. But during the 1970s it became clear that a degree of convergence was necessary at Community level to support and guide the efforts of the Member States towards harmonisation of requirements and safety criteria. The Council of Ministers voiced this need in its Resolution of 22 July 1975[9] on "The technological problems of nuclear safety". This Resolution, while "taking into account the prerogatives and responsibilities assumed by national authorities", makes reference to the alignment of safety requirements in the context of a desirable "harmonised approach at Community level". It also recognises the importance of nuclear safety beyond EC frontiers. It calls for effective collaboration among Member States at EC level and specifically requires the "progressive harmonisation of safety requirements and criteria".

This Council Resolution is the cornerstone of the "non-binding EU acquis" in the field of nuclear installation safety. In order to pursue its objectives, the Commission set up two expert groups dealing with nuclear installation safety: the Reactor Safety Working Group (RSWG) and the Nuclear Regulators' Working Group (NRWG)[10]. These two groups differed in their composition (the RSWG had a very extensive membership including regulators, operators, vendors and manufacturers, while the NRWG brought together all the national regulatory authorities), but they both dealt with the harmonisation of nuclear safety practices inside the EU. The NRWG put emphasis on licensing issues and harmonisation of safety requirements, while the RSWG focused more on harmonisation of methodologies and practices to comply with national requirements. Since their creation, both groups have studied in depth very important aspects of nuclear safety through task forces and specific projects, and have actively contributed to the development of the "non-binding EU acquis" through the publication of their studies, common positions and consensus documents (see Annex). Discussions on more policy-oriented issues of nuclear safety take place in other regulators' fora, such as the IAEA Senior Regulators' Group, the International Nuclear Regulators' Association (INRA) and the Western European Nuclear Regulators' Association (WENRA).

Another experts' group, the Working Group on Codes and Standards (WGCS), has produced through its three activity groups (AG1: manufacturing and in-service-inspection, AG2: structural mechanics, AG3: materials) numerous studies on the comparison of procedures, specifications, codes and standards, as well as proposals for improved design rules, inspection and testing methods, etc, contributing to the industrial efforts towards a voluntary-based standardisation[11].

[9] OJ C185, 14/08/1975, p. 1

[10] Formerly "WG1: Safety of Light Water Reactors - Methodology, Criteria, Codes and Standards".

[11] the WGCS has been set up in 1974 as a working group of the Fast Reactor coordinating Committee (FRCC), set up by the Council in 1970. An informal link was established in 1992 with the WG1, and WGCS's activities were re-oriented from fast reactors to light water reactors, with a clear reference to EC internal energy market (ref. COM(89) 347 of 7 August 1989)

In 1986, the Chernobyl accident revealed serious design deficiencies and operational safety problems in the East. This view was reinforced when the end of the Soviet era opened up the access to sites and information in an unprecedented way. Following on from this, the EU had the financial possibility and the wish to assist the CEEC and the NIS in the field of nuclear safety. In addition, the CONCERT Group, which brings together nuclear regulatory authorities from the EU Member States, CEEC and NIS, started its activities at the beginning of the 1990s. The aim of the CONCERT Group is to promote an increased co-operation between Western and Eastern European regulators and the sharing of experiences on co-operation and assistance programmes and on general regulatory issues.

Against this background, a second Council Resolution[12] was adopted in 1992. In this Resolution the Council reaffirmed the intentions of the 1975 Resolution and invited Member States to continue and intensify concerted efforts towards harmonisation of safety issues. In addition, it requested "Member States and the Commission to adopt as the fundamental and priority objective of Community co-operation in the nuclear field, in particular with the other European countries, especially those of Central and Eastern Europe and the Republics of the former Soviet Union, that of bringing their nuclear installations up to safety levels equivalent to those in practice in the Community and to facilitate the implementation of the safety criteria and requirements already recognised throughout the Community". Therefore the objectives already stated in 1975 gained a geographical dimension that went far beyond EU frontiers. One aspect of this extension was the co-operation policy; the other one was the assistance policy (see point 3 below).

The European Council has regularly recalled the 1992 Resolution in the context of the enlargement process and the importance of developing high standards of nuclear safety in Central and Eastern Europe. In response to this political issue, co-operation was further strengthened when the Commission invited experts from the candidate countries to participate in the existing co-operation schemes and working methods at EU level. The membership of the NRWG was progressively extended to all the CEEC nuclear regulators and it was decided that the RSWG be replaced by a new group bringing together regulators and operators from all EU Member States and CEEC. This new group, called the ENIS-G (European Nuclear Installations Safety Group), met for the first time in Brussels on 11 May 2000 and will hold its second meeting in January 2001.

Seven[13] of the candidate countries have also been fully associated to the Euratom RTD Framework Programme, in the framework of the pre-accession strategy.

2. Instruments developed by the nuclear industry

The efforts put in place by the EU nuclear industry (manufacturers, utilities and operators) to build up a common, voluntary "non-binding acquis" for the future also deserves to be recalled, because it has had spin-off effects on the approximation of national regulatory systems.

As co-operation activities progressed at Community level, the European nuclear industry also realised that trans-boundary co-operation was required in order to limit the costs of developing new reactor types and obtaining the necessary operating licenses – as well as to respond in a concerted way to public concerns. This co-operation followed two main paths: the concept of a new reactor, the European Pressurised Reactor (EPR), jointly developed by Framatome and Siemens, and the European Utilities Requirements (EUR), a grouping

[12] OJ C172, 08.07.1992, p.2
[13] Bulgaria, Czech Republic, Hungary, Latvia, Romania, Slovakia and Slovenia

of European utilities which pursue the standardisation on a voluntary basis of safety requirements for new generations of plants.

The first co-operation model responded to the need of the industry to develop a reactor that could be competitive and "licensable" both in France and in Germany. However, this industrial co-operation model could not attain its aim without changes and adjustments in the French and German regulatory systems. The very interesting consequence of this industrial move has been the set-up of a scheme of close co-operation between the two regulatory authorities, which has resulted, among other things, in a voluntary approximation of nuclear installation safety rules and regulations[14].

The second type of co-operation, launched at the beginning of the 1990s, was based on the fact that the electricity market deregulation consequential to the opening up of the Single Market and the low prices of fossil fuels had toughened competition in a scenario where national regulations remained very different and public acceptance was more and more difficult to obtain. Several utilities, representing all the Member States with a nuclear power programme, founded the "European Utility Requirements for Light Water Reactor Plants" (EUR). The aim of the EUR is to promote the emergence of future standardised European designs through the harmonisation of: safety approaches, target criteria and assessment methods, environmental design conditions and design methods, information required for economic assessment and associated criteria, design requirements for the main systems and equipment and the equipment specifications and standards. Russia is already taking part in the EUR meetings in preparation of its full membership and several candidate countries' utilities have applied to become members of the EUR. The EUR volumes have been distributed to EU national regulators and to international organisations.

3. EU mechanisms of assistance to CEEC and NIS for the improvement of nuclear safety

A third instrument which has contributed to the consolidation of the "non-binding EU acquis" in the field of nuclear installation safety is the technical assistance to CEEC and NIS for the improvement of nuclear safety levels. The first IAEA missions to Central and Eastern Europe after the Chernobyl accident identified serious shortcomings in the design and operational safety management, but the awareness of the potential dangers and the dedicated resources to improve the situation were lacking. At their summit in Munich in July 1992, the G-7 countries called for a programme of action including operational safety improvements, near-term technical improvements based on safety assessments, improvements of nuclear safety regulation, examination of the potential for upgrading plants of more recent design and of the scope for replacing less safe plants by the development of alternative energy sources and the more efficient use of energy.

Since then, the European Union, through both bilateral and Community assistance, have contributed the largest part of the Western financial effort towards these objectives. Besides the delivery and installation of industrial material and works, which has improved the safety of existing installations in the CEEC and the NIS, a fundamental aim of this effort is the transfer of nuclear safety culture to the operators and national regulatory authorities. Therefore, it was necessary to reaffirm the fundamental principles of operator responsibility and the regulatory body's independence, competence and adequate level of resources, and to create and consolidate a safety culture where the human factor recovered its central role through appropriate operational procedures and training courses. The fact

[14] GPR/RSK Proposal for a common safety approach for future pressurized water reactors, 25 May 1993

that the Community assistance activities were provided by various consortia from several Member States implied that such objectives were pursued in a co-operative, EU-based manner, and were not a purely national transfer of know-how. Moreover, EU assistance, having a multilateral nature, led the participating Member States to elaborate and present to the candidate countries a concerted viewpoint and common guidelines[15].

[15] "Establishing an effective nuclear safety regulatory regime – Part I – Objectives and requirements", 1994, EUR 15397; "Establishing an effective nuclear safety regulatory regime – Part II – Arrangements", 1995, EUR 16243

ANNEX

Technical basis for "EU non- binding acquis" on safety of nuclear installations

Introduction

The Council resolution of 22 July 1975 on the technological problems of nuclear safety foresaw the Community action in respect to the progressive harmonisation of safety requirements and criteria to proceed in three stages:

- the exchange of information and the listing of the methodologies, criteria and standards applied in the different Member States;
- the identification of the similarities and dissimilarities and analysing reasons for their existence and their safety significance;
- the establishment of recommendations pursuant to article 124 second indent of the Euratom Treaty.

The first two stages have been conducted within the Commission's working, which included regulatory bodies, utilities and equipment vendors.

General principles

Nuclear safety is the achievement of proper operating conditions, prevention of accidents or mitigation of accident consequences resulting in protection of site personnel, the general public and the environment from undue radiation hazards. The safety of nuclear power plants (NPPs) is based on fundamental principles of radiation protection and implemented in general (technological) safety principles.

A set of basic safety principles has been developed by the EC's WG1 as a necessary starting point for any further harmonisation, and published by the Commission in 1981 as a Communication to the Council (ref. [2]). The group defined a first category of principles that consisted of general safety objectives, i.e. to avoid accidents and to limit the radiological consequences of the operation of the nuclear power plant during all operational states and accident conditions. These principles were directly related to the Euratom legislation derived from the chapter III of the Treaty (ref. [3]), which provides a prescriptive basis within the EU.

A second category stated general safety principles to achieve the objectives as given in the first category. It started with the principle of defence in depth:

- prevention of deviation from normal operation
- detection of deviations from normal operation and provision of means to prevent such deviations leading to accident conditions
- provision of engineered safety features to control and mitigate the accident conditions,

stressed the need to ensure fundamental safety functions in order to implement the defence in depth concept:

- reactivity control
- heat removal
- containment of radioactivity,

and to maintain independent physical barriers against the escape of radioactivity:

- fuel matrix and cladding

- reactor coolant system boundary
- containment system,

and developed other fundamental aspects such as quality assurance procedures, human factors, assessment and verification of safety.
The document also provided a scheme for the development of subsequent requirements and criteria that are needed to fulfil the general safety principles. Requirements had to be associated to different phases of:

- siting
- design
- construction
- commissioning
- operation
- decommissioning,

and to different areas (e.g. safety evaluations, quality assurance, radiological protection, human factors, etc.).

Similar activities were carried out by the International Nuclear Safety Advisory Group (INSAG) under the auspices of the IAEA and led to the publication of the document "Basic Safety Principles for Nuclear Power Plants"(ref. [4]), whose scope was "an attempt to provide a logical framework for the understanding of the underlying objectives and principles of nuclear safety and the way in which its aspects are interrelated". A comparison between EC/WG1's and INSAG's approaches (ref. [5]) was carried out by the experts of the WG1. They concluded that "the concepts included in the objectives and fundamental principles exposed in INSAG's 1988 report were already taken into account in the Commission's document of 1981 and the Council Resolution of 1975". They also recalled "the importance of the chapter III in the Euratom Treaty in establishing common mandatory standards for the radiological protection of people and workers in the European Community".

The INSAG-3 report was used later as a major input for the publication of the IAEA's 25 fundamentals principles of nuclear safety ("The safety of nuclear installations"(ref. [6])), which stand at the highest level in the hierarchy of publications on the IAEA's Nuclear Safety Standards Programme (NUSS). In addition to the principles edicted in earlier publications, it puts emphasis on legal and organisational aspects:

- legislation and regulatory framework (including licensing and inspection systems, regulation and enforcement),
- the prime responsibility of the licence holder,
- the need for adequate financial and human resources for all safety related activities.

The 25 principles constitute the technical basis (articles 7 to 19) of the Convention on Nuclear Safety adopted in Vienna on 17 June 1994 (ref. [7]).
The state of implementation of the 25 principles in EU Member States was first addressed in the frame of the Commission's working groups' activities (ref. [8]), and later during the first review meeting of the contracting parties of the Convention on Nuclear Safety (ref. [9]).

Safety requirements and practices for the design and operation of nuclear power plants

Safety requirements include objectives, concepts, and methods to ensure safety based on general safety principles.

Development and revision of nuclear safety standards is a statutory task of the International Atomic Energy Agency (IAEA). These common safety recommendations were prepared first to provide countries embarking in nuclear energy programmes with guidance on the many safety aspects, but recently, they helped substantially the CEECs and NIS in their effort to develop national regulatory documents. A comprehensive set of safety recommendations has been produced since the mid-seventies, and is presently under extensive review. Its scope covers general topics (i.e. fundamentals, emergency preparedness, governmental organisations, and quality assurance) and four specific areas (nuclear safety, radiation safety, radioactive waste safety and safe transport). It is structured according to a hierarchy of documents (i.e. safety fundamentals, requirements and guides). The two top categories need to be approved by the Board of Governors and therefore represent the consensus of the 130 IAEA's Member States.

Work at Community level did not aim at the development of safety standards. However, through exchange of information and discussions on specific national practices, it made effective contributions, based on consensus, to a practical harmonisation of general safety requirements for design and operation of nuclear power plants. Approximation of detailed safety requirements could not be achieved in a uniform manner and had to be adapted in appropriate ways to the respective technical concepts and organisation structures in the individual Member States.

The 1988 "Consensus Document on Safety of Light Water Reactors" (ref. [10]), whose conclusions were published as a Communication to the Council "Assurance of safety of nuclear power plants -- Objectives and methods" (ref. [11]), was a milestone in the implementation of the Council Resolution of 1975. It concluded that harmonisation of the general safety requirements and basic methodologies (including the deterministic method, the probabilistic method and the systematic use of operating experience) had been achieved. The document provided detailed references and summaries of the major EC/WG1's activities aimed to analyse similarities and differences between Member States in a number of technical areas.
The 1988 consensus document identified three areas where additional work was needed: safety in operation, off-site consequences of design basis accidents and the consideration of accidents that could lead to severe core damage. In addition, lessons learnt from the Chernobyl accident suggested that further work was also required in the fields of safety culture, post-accident management, and revaluation of the risks associated with reactivity accidents.

The "1995 Consensus document on safety of European LWR" (ref. [12]), prepared by the EC's Reactor Safety Working Group, complemented the 1988 consensus document in the following areas:

- safety in operation: in-service inspection and maintenance to ensure that structure and components remain with the design acceptance criteria throughout the life of the plant, training to ensure that all the levels of the plant staff perform correctly under all foreseen and unforeseen circumstances, and safety culture whose essence is a safety conscious attitude which is considered essential for safe operation.
- source term and realistic off-site consequences for design basis accidents, including accidents where the containment may be by-passed.
- severe accidents prevention, mitigation of potential consequences and management, taking into account the lessons learnt from the Three Mile Island accident, from the results of Probabilistic Safety Assessment studies and from research and development.

The report largely relied on activities carried out in a Community context, but also integrated results achieved in the framework of international organisations and groups (e.g. OECD/NEA, UNIPEDE, INSAG).

Recent work

Along the lines of the 1995 consensus document, a number of areas have been identified by the Commission's advisory groups where further harmonisation would be beneficial:

- off-site releases of Design Basis Accidents: large break loss of coolant accidents, steam generator tube rupture (ref. [13], to [15]);
- operational safety: qualification of Non Destructive Testing, risk-informed in-service inspection, applications of the Leak-Before-Break concept, ageing issues (ref. [16] to [22]);
- safety issues of conceptual projects for the next generation of plants (ref. [23]);
- Probabilistic Safety Assessment (ref. [24] and [25]);
- licensing issues: comparison of procedures and associated documentation (ref. [26]), issues related to new technologies (ref. [27]);
- design safety: comparison of Emergency Feed Water Systems (ref. [28] and [29]).

Research activities related to severe accident prevention and mitigation continued both in a Community context (ref. [30] and [31]) and in other fora (OECD/NEA).

REFERENCES

[1]	Council resolution of 22 July 1975 on the technological problems of nuclear safety.	O.J. C185/1
[2]	Safety principles for light water reactor nuclear power plants Communication from the Commission to the Council.	COM(81)519 final
[3]	Council Directive 96/29/Euratom of 13 May 1996 laying down basic safety standards for the protection of the health of workers and the general public against the dangers arising from ionizing radiation	O.J. L159
[4]	Basic safety principles for nuclear power plants.	IAEA Safety Series 75-INSAG3
[5]	Comparison between the INSAG3 report and the Communication from the Commission to the Council "Safety principles for light water reactor nuclear power plants" ref. COM(81)519.	DOC WG1-88/P28c
[6]	Safety Fundamentals: The safety of nuclear installations, 1993	IAEA Safety Series No 110
[7]	Convention on Nuclear Safety, Texts adopted by the Diplomatic Conference in Vienna, 14-17 June 1994	IAEA/INCIRC/449
[8]	Implementation of the 25 Principles of Nuclear Safety in different EU Member States. Prepared by P. Govaerts, AV Nucléaire, Belgium	ETNU-CT95-00291
[9]	Summary report of the Review meeting of contracting parties to the Convention on nuclear safety, Vienna 12-13 April 1999	CNS-RM-99/021
[10]	Consensus document of safety of LWR. 21.06.1988	DOC WG1-88/P17
[11]	Assurance of safety of NPPs. Objectives and methods. Communication from the Commission to the Council.	COM(88)788
[12]	1995 Consensus Document on Safety of European LWR.	EUR 16803
[13]	Benchmark Exercise on the Probabilistic Safety Assessment of Steam Generator Tube Rupture Radiological Releases: Synthesis report.	EUR 18550
[14]	Fuel cladding failure following a large LOCA	EUR 19256
[15]	Determination of the in-containment source term for a Large-Break Loss of Coolant Accident, final report, October 2000.	to be published
[16]	Common position of European Regulators on qualification of NDT Systems for pre- and in-service inspection of light water reactor components. Revision 1 (1997).	EUR 16802
[17]	European Methodology for Qualification of Non-Destructive Testing (Second Issue). European Network for Inspection Qualification (1997).	EUR 17299
[18]	Report on risk-informed in-service inspection and in-service testing	EUR 19153
[19]	European safety practices on the application of the leak before break (LBB) concept.	EUR 18549
[20]	Leak before break assessment of pressurized components	EUR 17574
[21]	Safe management of NPP ageing in the European Union, final report, September 2000	to be published
[22]	Guideline for the evaluation of European practices on the harsh environment qualification of electrical and I&C equipment	EUR 17563
[23]	TSO Study Project on Development of a Common Safety Approach in EC for Large Evolutionary PWRs. Final report (summary report) prepared by AVN (Technical Project Leader) and AEA, ANPA, CIEMAT, GRS, IPSN. June 1997.	Riskaudit report n° 92/1
[24]	Harmonisation in the field of safety of nuclear installations - Level 1 of Probabilistic Safety Assessment (PSA). Final Report	DOC WG1-97/P29
[25]	Towards harmonisation of European Practices in PSA Level 1 methodology and in data collection process - Current and good practices	DOC WG1-97/P31
[26]	Licensing procedures and associated documentation - Review of current practices (F, FRG, UK, Sweden). 95-00279	EUR 16801
[27]	European nuclear regulators' current requirements and practices for the licensing of safety critical software for nuclear reactors	EUR 18158
[28]	Comparison of safety systems for modern Pressurised Water Reactors - Application to the Emergency FeedWater System, Belgatom, EdF, NNC, Siemens, Rev. 1, November 1994	DOC WG1-94/P17
[29]	Study report on the comparison of Emergency Feedwater Systems - February 1997, AEA-T	DOC WG1-97/P01
[30]	Nuclear Fission Safety - Progress Report 1998 - Vol.1: Reactor Safety and innovative approaches. Vol. 2: Radioactive waste management and disposal and decommissioning	EUR 19115/1&2
[31]	FISA 99 - EU Research in reactor safety	EUR 19532

Part II: Commitments made in the field of nuclear safety by Bulgaria, the Czech Republic, Hungary, Lithuania, Romania, Slovakia and Slovenia

BULGARIA

COMMITMENTS MADE IN THE FIELD OF NUCLEAR SAFETY

Short description of the Nuclear Installations

Bulgaria operates the six-unit Kozloduy NPP. Units 1 to 4 are of VVER 440/230 design, Units 5 and 6 are VVER-1000/320 reactors.

COMMITMENTS TOWARDS THE EUROPEAN UNION

Europe Agreement

The Association Agreement between the European Communities, the Member States and Bulgaria was signed in March 1993 and entered into force in February 1995.

The Agreement includes an Article on co-operation in nuclear safety (Article 80), while the nuclear sector is included in the areas for co-operation in energy (Article 79). Nuclear law is listed among the areas where approximation of laws will be extended (Article 70).

Article 70, Approximation of laws:

The approximation of laws shall extend to the following areas in particular: customs law, company law, banking law, company accounts and taxes, intellectual property, protection of workers at the workplace, financial services, rules on competition, protection of health and life of humans, animals and plants, consumer protection, indirect taxation, technical rules and standards, nuclear law and regulation, transport and the environment.

Article 79, Energy

[….. ….]

2. Cooperation shall include among others technical assistance when appropriate in the following areas:
   - formulation and planning of energy policy, including its long-term aspects,
   [……]
   - the nuclear energy sector,
   [……]

Article 80, Nuclear safety

1. The aim of co-operation is to provide for a safer use of nuclear energy.

2. Co-operation shall mainly cover the following topics:
   - improvement of the operational safety of Bulgarian nuclear power plants,
   - evaluation of the feasibility of back-fitting the existing power plant equipped with VVER-440 reactors,
   - upgrading training of management and other personal of nuclear installations,
   - upgrading Bulgaria's laws and regulations on nuclear safety and strengthening the supervisory authorities and their resources,

- nuclear safety, nuclear emergency preparedness and management,
- radiation protection, including environmental radiation monitoring,
- fuel cycle problems and safeguarding of nuclear materials,
- radioactive waste management,
- decommissioning and dismantling of nuclear installations,
- decontamination.

3. Co-operation will include exchange of information and experience and R& D activities in accordance with Article 76.

Association Council

Bulgaria has not undertaken any commitment on nuclear safety within the framework of the Association Council established by the Europe Agreement.

Association Committee, Association sub-committees

Following the annual meetings of the Association Committee established by the Europe Agreement (six meetings to date), agreed minutes are signed which sometimes include statements by the Bulgarian side on nuclear safety. The Bulgarian delegation presents position papers, including a section on nuclear safety under the energy chapter. Similarly, the signed minutes of the relevant sub-committee meetings (sub-committee no.6, or no.7 before 1999) include statements on nuclear safety by the Bulgarian side. These documents contain both descriptions and assessments of what has been accomplished in the preceding period, and statements and declarations of intent concerning future activities. Some of the latter are equivalent to commitments.

Understanding of 29 November 1999

Under the Understanding signed on 29 November 1999 between the Bulgarian Government and the European Commission, the Bulgarian Government fully endorsed the conclusions of the Cologne European Council on the importance of high standards of nuclear safety in the context of the European Union's enlargement.

Under the same Understanding, Bulgaria committed to early closure of Units 1 to 4 of the Kozloduy Nuclear Power Plant. More specifically, Bulgaria committed to definitively close down Units 1 and 2 before the year 2003. Definitive closure dates for units 3 and 4 would be decided in 2002 in agreement with the Commission and taking account of the Nuclear Safety Account Agreement and other relevant factors. These dates would be before the then envisaged closure dates of 2008 and 2010, respectively, the Commission's understanding being that the definitive closure of these units would take place in 2006 at the latest. Under the same Understanding, the Commission offered a multi-annual Community assistance package for Bulgaria's energy sector. The elements of the Understanding form an integral whole.

Implementation

The Bulgarian authorities have undertaken a number of commitments concerning the implementation of the Understanding. These commitments were made at the 6th Meeting of the EU-Bulgaria Association Committee (July 2000) and within the framework of the meetings of the Joint European Commission – Bulgaria Working Group for the closure and decommissioning of Units 1-4 of the Kozloduy Nuclear Power Plant (February and June

2000). Further commitments were undertaken by the Bulgarian side at expert meetings that have been held under the Joint Working Group's auspices.

Guarantee Agreement
Euratom loan for Kozloduy Units 5 and 6

The Agreement was signed between Bulgaria and the European Atomic Energy Community simultaneously with the Euratom loan on 12 June 2000. The Guarantee Agreement is currently under ratification by the Bulgarian Parliament.

In the section of Undertakings, it is stipulated (Section 4.4) that the Guarantor (The Bulgarian Government) will procure the complete and definitive closure of Units 1 and 2 of the Kozloduy nuclear power plant before the year 2003; and of Units 3 and 4 of the Kozloduy nuclear power plant on or before a date to be agreed between the Guarantor and the European Commission on or before 31 December 2002.

Accession negotiations on Chapter 14 "Energy", Position Paper

Negotiations on this chapter have not yet been opened with Bulgaria. The Bulgarian Government has not yet presented its Position Paper.

UNILATERAL UNDERTAKINGS

National Energy Strategy

The 'National Strategy for Development of Energy and Energy Efficiency till 2010' was adopted by the Bulgarian Government in September 1998 and approved by the Parliament in March 1999.

In its part on 'optimal development of power generation capacities', the Strategy sets out as one of three high-priority investment targets, to 'Ensur[e] stable power generation by maintaining of the safety and security of nuclear power capacities'. The actions envisaged in this context include refurbishing and upgrading the generating capacities at the Kozloduy NPP for the purpose of improving the nuclear and labour safety, as well as solving the problems related to spent fuel storage and radioactive waste treatment. The strategy also foresees the decommissioning of units 1-4 of the Kozloduy plant at dates that have since been invalidated by the Understanding signed on 29/11/1999. The latter Understanding stipulates that Bulgaria will take all the appropriate measures so that the decisions on the closure of units 1-4, as well as the Commission's assistance commitments, will be reflected in the country's energy policy and planning. It also stipulates that the updating of the Energy Strategy will be completed by the end of 2002.

National Programme for the Adoption of the Acquis (2000)

The NPAA was adopted by the Bulgarian Council of Ministers on 27 April 2000.

The Programme mentions that nuclear safety is a main priority of the Bulgarian energy policy.

The main short-term (2000) priority is the strengthening of the regulatory body and the amendment of its organisation. Other short-term priorities include enhancement of the qualification of the personnel that works at nuclear facilities; improvement of the safety requirements on activities at the plants, and on implementation of safety requirements concerning decommissioning; increase of the efficiency and broadening the scope of the system for nuclear material account for and control; and regulation of the relationships concerning the use of atomic energy for peaceful purposes, and the control over the activities and the entities that perform these activities by law.

Improvement of the quality of the technical control over the nuclear power plant facilities is listed as a medium-term priority.

POLITICAL EXPECTATIONS EXPRESSED BY THE EUROPEAN UNION

Accession Partnership (1999)

The Accession Partnership contains expectations defined by the Commission and adopted by the Council and identifies short- and medium-term priorities that the candidate country is expected to fulfil. These priorities derive from the dialogue held with the candidate country and the analysis undertaken through the Commission's Regular Report on the progress of the respective country towards accession. The Accession Partnership contains a strong political expectation on behalf of the European Union in the prioritisation of key tasks linked to the accession process.

In the area of nuclear safety the following priorities are included in the 1999 Accession Partnership:

Short-term

- adopt and implement a realistic timetable for closure and decommissioning of units 1, 2, 3 and 4 of Kozloduy Nuclear Power Plant; monitor management of spent fuel and radioactive waste;
- continue strengthening the independence and technical capability of the nuclear safety authority.

Medium-term

- implement commitments on the phased closure and decommission of units 1, 2, 3 and 4 of Kozloduy NPP; maintain a high level of nuclear safety for Kozloduy units 5-6;
- strengthen regulatory structures for nuclear safety and radiation protection.

COMMITMENTS TOWARDS OTHER PARTIES

Nuclear Safety Account Agreement

On 16 June 1993, Bulgaria entered into the "Grant Agreement (Kozloduy Nuclear Safety Project) among the European Bank for Reconstruction and Development as Administrator of Grant Funds provided by the Nuclear Safety Account[16], the Natsionalna Electricheska Kompania and the Government of the Republic of Bulgaria".

[16] The European Communities are party to both the Nuclear Safety Account and the EBRD.

Under the above agreement, Bulgaria undertook certain commitments concerning the shutdown of units 1-4 of the Kozloduy NPP.

Adhesion to the Convention on Nuclear Safety

Bulgaria signed the Convention on 20 September 1994. After ratification and deposition on 8 November 1995, Bulgaria is bound by the Convention since 24 October 1996.

CZECH REPUBLIC

COMMITMENTS MADE IN THE FIELD OF NUCLEAR SAFETY

Short description of the Nuclear Installations

The Czech Republic operates four VVER-440/213 reactor units at the Dukovany NPP. The Temelin NPP with two reactors of VVER-1000 design is still under construction. Thereby Unit 1 is completed and undergoing tests, Unit 2 is being completed.

COMMITMENTS TOWARDS THE EUROPEAN UNION

Europe Agreement

The Association Agreement between the European Communities, the Member States and the Czech Republic was signed in October 1993 and entered into force in February 1995.

According to the Europe Agreement Art. 69-70, the Czech Republic shall endeavour to ensure that its legislation will be gradually made compatible with that of the Community, including nuclear law and regulation and protection of health and life of humans (which includes sustained maintenance of nuclear and radiation safety).

The Europe Agreement provides for co-operation in the field of nuclear safety, with the aim to provide for a safer use of nuclear energy (Art. 80). Co-operation shall mainly cover the following topics:
- nuclear safety, nuclear emergency preparedness and management;
- radiation protection, including environmental radiation monitoring;
- fuel cycle problems, safeguarding of nuclear materials;
radioactive waste management,
- decommissioning and dismantling of nuclear installations,
- decontamination.

Co-operation should also include exchange of information and experience and R&D activities (in accordance with Art. 76).

Association Council

The Association Council, at its last meeting on 19 September 2000, decided that the Czech Republic should continue to provide information in the field of nuclear safety.

Association Committees, Working Groups, bilateral contacts

At the meeting of the EU-Czech Association Committee on 6/7 June 2000, the EU stressed the importance of regular and comprehensive information on nuclear safety matters. It welcomed the information already provided by the Czech authorities and invited the Czech side to update information on the upgrading of Dukovany, the completion/licensing of Temelín, developments in respect of the safety authority as well as developments regarding nuclear waste/spent fuel.

UNILATERAL UNDERTAKINGS

National Energy Strategy

A National Energy Strategy was published in 2000, based on the decision of the Government of the Czech Republic of January 12, 2000, No. 50.

In the strategy it is stated that further development of the nuclear power sector will be evaluated within the context of economically optimum exploitation of the coal deposits with respect to projections of demand for the end usage of energy and, within that framework, demand for electricity.

If any additional nuclear power plant is to be built after 2015, such a project must be acceptable to the public and must be competitive.

Through representatives of the State in the Boards of CEZ, effective control of the progress of the finishing of the construction of the Temelin nuclear power plant should be secured, with emphasis on meeting the dates for the charging of the reactors with nuclear fuel, Unit 1 by September 2000 and Unit 2 by December 2001, and not exceeding the aggregate budget of CZK 98.6 billion.

Refurbishment and security enhancement of the Dukovany nuclear power plant (JEDU – 4x 440 MW) should be secured, including improvement of nuclear safety – reconstruction, obtaining license to operate the power plant until 2025 and secure economic competitiveness of the power plant in the deregulated markets through 2000-2009.

A new conception of radioactive waste handling in the Czech Republic should be prepared and its assessment in accordance with Art. 14 of Act 244/1992 Col. Secured in 2000.

National Programme for the Adoption of the Acquis (2000)

The Programme describes the Czech Republic's priorities with regard to nuclear safety at the Dukovany and Temelin Nuclear Power Plants.

Short-term priorities:

- Preparing for the first block of the Temelin NPP, including safety documentation so permits for its activation can be issued in line with Czech law.
- Monitor the harmonisation programme of the Dukovany NPP.
- Submit to the government s strategy for the disposal of radioactive waste and spent fuel.

Medium-term priorities:
- In the framework of the harmonisation plan at Dukovany, work will continue including replacing the control and management tasks.
- A new spent storage site to be completed before 2005.
- Preparation of the second block at Temelin NPP including safety documentation so permits for its activation can be issued in line with Czech law.

Nuclear Safety and Radiation Protection:

Short-term priorities:
- To prepare the Amendment to the Act No. 18/1997, Coll., the Atomic Act, and to launch preparations of amendments to its implementing regulations for the purpose of harmonisation with Articles 33 through 37 of the Treaty establishing the Euratom, the Directives 96/29/Euratom, 97/43/Euratom, 90/641/Euratom, 89/618/Euratom, 92/3/Euratom, 93/1493/Euratom, and the Regulations No. 87/3954/Euratom, 97/737/EEC, and documents following these fundamental regulations. The deadline for submitting the proposal for amendment to the Atomic Act to the Government is December 2000.
- In the framework of the legislation harmonisation process, the State Office for Nuclear Safety (SONS) shall discuss with the Ministry of Agriculture, Ministry of Health, Ministry of the Interior and other involved ministries whose competency may relate to the part of the acquis regulating the area of radiation protection, respectively nuclear safety, methods of reflecting some of requirements/provisions of the EC law into legislation within the respective competency of the ministries mentioned.
- To consult with EU Member States experts on methods for implementation of the EC legislation mentioned above.
- For SONS to negotiate on the more intensive involvement of the Czech Republic in the work of EC advisory bodies in the area of nuclear safety (for example Nuclear Regulatory Working Group, Reactor Safety Working Group), with the aim of proving its competence in providing for the required level of nuclear safety of nuclear facilities located on the territory of the Czech Republic.

Medium Term Priorities:
- To support the state supervision performance and to harmonise its practice with that of the regulatory authorities in the EU Member States.
- To prepare amendments to implementing regulations to the Atomic Act and to submit them to the Legislative Council of the Government by 30 October 2001. The Czech legislation in the area of nuclear safety and radiation protection shall be fully harmonised with the appropriate part of the acquis when the amendments to the Atomic Act including its amended implementing regulations enter into force on 1 July 2002. Some provisions shall remain ineffective until the date of accession of the Czech Republic to the EU.
- SONS shall co-operate with other Ministries (Ministry of Health, Ministry of Agriculture, Ministry of the Interior, Ministry of Industry and Trade, or potentially

others) in preparation of legislation within the competency of the respective Ministries and covered in requirements (provisions) of the EC legislation.
- SONS, in co-operation with other Ministries (Ministry of Finance, Ministry of Health, Ministry of Agriculture, Ministry of the Interior, Ministry of Industry and Trade, potentially others) shall prepare systems for communication of information and implementation of control mechanisms, required by EC law and which the Czech Republic is bound to enforce by the day of accession.

Accession negotiations on Chapter 14 "Energy", Position Paper

In its Position Paper (CONF-CZ 33/99), the Czech Republic presents its stance as follows:

"In safeguards area, the preparation of organisational changes towards reconstruction of the state system accounting for and control of nuclear materials and towards ensuring its co-operation with the Euratom in supervision over nuclear material handling will be finished so that by the date of accession of the Czech Republic to the EU, the Regulation 3227/76/Euratom could be fully applicable.

In the area of nuclear power financing the Czech Republic has been assessing the conditions of loans from Euratom to finance the construction or to raise the level of safety of nuclear power stations.

A modernisation programme of the Dukovany NPP will be finished in 2010 as the individual actions are progressing during shut-downs necessary for the refuelling. The modernisation programme will ensure a long-term, safe and economic operation at the level comparable with reactors operated in the EU Member States.

Both nuclear power plants (Dukovany and Temelin) are in compliance with the internationally recognised nuclear safety standards, as confirmed by independent international reviews and the First Meeting of the contracting Parties to the Convention on Nuclear Safety in April 1999."

The Czech Republic has repeatedly supplied additional information to the Accession Conference.

POLITICAL EXPECTATIONS EXPRESSED BY THE EUROPEAN UNION

Accession Partnership (1999)

The Accession Partnership contains expectations defined by the Commission and adopted by the Council and identifies short- and medium-term priorities that the candidate country is expected to fulfil. These priorities derive from the dialogue held with the candidate country and the analysis undertaken through the Commission's Regular Report on the progress of the respective country towards accession. The Accession Partnership contains a strong political expectation on behalf of the European Union in the prioritisation of key tasks linked to the accession process.

The Accession Partnership with the Czech Republic 1999 mentions the following medium-term priorities in the energy sector:
- Continue to ensure high levels of nuclear safety at Dukovany and Temelin (upon completion) nuclear power plants.
- strengthen regulatory structures for nuclear safety and radiation protection.

Accession negotiations on Chapter 14 "Energy", Common Position

In its Common Position on the energy chapter (CONF-CZ 54/99), the EU expresses the following stance:

"The Czech Republic is invited to provide comprehensive and regular information on the ongoing upgrading programme for the Dukovany nuclear power plant, on the completion programme and licensing programme – to be based on the final design – for the Temelin nuclear power plant, on investments in the nuclear fuel cycle, including spent fuel and waste management and the associated financial provisions, including state funds, as well as on the strengthening of the safety authority and its work.

Recalling that responsibility for the safe design, construction and operation of a nuclear installation rests with the Member State having jurisdiction over such an installation, the Czech Republic in encouraged to implement measures along the lines of the Council Conclusions referred to above; with regard to the Temelin nuclear power plant, this should be before this plant is put into operation. Furthermore, the Czech Republic should ensure that the upgrading programme of the Dukovany plant will proceed independently of any delays and cost overruns at Temelin."

COMMITMENTS TOWARDS OTHER BODIES

Adhesion to the Convention on Nuclear Safety

The Czech Republic signed the Convention on 20 September 1994. After approval and deposition on 18 September 1995, the Czech Republic is bound by the Convention since 24 October 1996.

HUNGARY

COMMITMENTS MADE IN THE FIELD OF NUCLEAR SAFETY

Short description of the Nuclear Installation

Hungary operates the Paks Nuclear Power Plant with four reactors of VVER 440/213 design.

COMMITMENTS TOWARDS THE EUROPEAN UNION

Europe Agreement

The Association Agreement between the European Communities, the Member States and Hungary was signed the 16 December 1993 *(Official Journal n° L 347 du 31/12/1993 p. 0002 - 0266)*. Article 78 of the Association Agreement (Europe Agreement) addresses the issue of nuclear safety. This article encourages co-operation between Hungary and the EU in the field of nuclear safety:

"Article 78
Nuclear safety
1. Co-operation shall primarily aim at providing for a safer use of nuclear energy.
2. Co-operation shall mainly cover the following topics:
- nuclear safety, nuclear emergency preparedness and accident management,
- radiation protection, including environmental radiation monitoring,
- fuel cycle problems, safeguarding of nuclear materials,
- radioactive waste management,
decommissioning and dismantling of nuclear installations,
decontamination.
3. Co-operation will include exchange of information and experience and R&D activities in accordance with articles 74.

Association Council

The last Association Council meeting on 19 September 2000 made no reference to nuclear safety. [Is this section really necessary then? Shouldn't we skip it altogether?]

Association Committees, Working Groups, bilateral contacts

During the 8th meeting of the EU-Hungary Association Committee (Brussels 12 April 2000), the Hungarian delegation summarised the steps made by the Government to upgrade the safety of the Paks Nuclear Power Plant to that of a safety level

comparable with that of the Western European nuclear power station. The EU delegation underlined the importance of securing a high level of radiation protection.

UNILATERAL UNDERTAKINGS

National Energy Strategy

Hungary is pursuing an updating programme at the Paks NPP aimed to reach a level of safety comparable with that of EU countries. The Atomic Energy Authority is pursuing an active programme of issuing safety guidelines. Hungary will develop a longer-term solution for spent fuel and nuclear waste. Hungary Accept the "*acquis*" in the nuclear sector including the obligations relating to the Euratom Treaty, secondary legislation in areas such as nuclear safeguards and supply, and international nuclear agreements. Hungary intends to terminate its nuclear co-operation agreements with the United States and Canada and to replace them by the Euratom agreements.

National Programme for the Adoption of the Acquis (2000)

In the National Programme for the adoption of the Acquis the following actions are indicated as medium term priorities:

- Review of guidelines and the preparation of review of the nuclear safety regulations;
- Introduction of the application of safety indicators during the safety rating process at the supervised nuclear facilities;
- Obtaining of a licence required for the implementation of a safety system for a new reactor;
- Reporting of any possible extraordinary events and the receiving of reports from other countries;
- Preparation of document that is compatible with the record keeping system used by Euratom.

Accession negotiations on Chapter 14 "Energy", Position Paper

According to the position paper (CONF – H – 26/99) on Energy Hungary stated that is ready to take on and apply the acquis on Nuclear energy including the obligation relating to the Euratom Supply Agency. Hungary is ready to terminate its international obligations that are inconsistent with the acquis (agreement with USA and Canada) and to take on the obligation arising from the relevant agreement of Euratom.

Hungary has repeatedly provided additional information to the Accession Conference.

POLITICAL EXPECTATIONS EXPRESSED BY THE EUROPEAN UNION

Accession Partnership (1999)

The Accession Partnership contains expectations defined by the Commission and adopted by the Council and identifies short- and medium-term priorities that the candidate country is expected to fulfil. These priorities derive from the dialogue held with the candidate country and the analysis undertaken through the Commission's Regular Report on the progress of the respective country towards accession. The Accession Partnership contains a strong political expectation on behalf of the European Union in the prioritisation of key tasks linked to the accession process.

The 1999 Accession Partnership spells out the following priorities:
Short-term:

- accelerate the transposition and enforcement of framework legislation for waste management; further align safety standards for radiation protection,

Medium-term:

- continue to ensure high levels of nuclear safety at Paks Nuclear Power Plant,
- strengthen regulatory structures for nuclear safety and radiation protection.

Accession negotiations on Chapter 14 "Energy", Common Position

In its Common Position of 27 July 2000 (CONF-H 40/00), the European Union expresses the following stance:

"The EU notes Hungary's confirmation of its full acceptance and application by accession of the "acquis" in the nuclear sector (including the obligations relating to the Euratom Treaty, secondary legislation in areas such as nuclear safeguards and supply, and international nuclear agreements).

The EU also notes that Hungary reconfirms its intention to terminate its nuclear co-operation agreements with the United States and Canada and to replace them by the Euratom agreements upon accession.

The EU recalls its General Position on the importance of the objective of a high level of nuclear safety and environmental protection, as reflected in relevant Council Conclusions. The EU is determined to keep under close review throughout the accession process the issues covered therein. The EU will continue to monitor the situation of nuclear safety in Hungary until the accession, recalling that responsibility for the safe design, construction and operation of a nuclear installation remains incumbent on the State having jurisdiction over it. Hungary is invited to continue to provide comprehensive and regular information concerning developments in the field of nuclear energy including nuclear safety, particularly on the ongoing upgrading programme for the Paks nuclear plant and investments in the nuclear fuel cycle, including spent fuel and waste management, and the associated financial provisions,

including state funds, as well as on the strengthening of the safety authority and its work."

COMMITMENTS TOWARDS OTHER BODIES

Adhesion to the Convention on Nuclear Safety

Hungary signed the Convention on 20 September 1994. After ratification and deposition on 18 March 1996, Hungary is bound by the Convention since 24 October 1996.

LITHUANIA

COMMITMENTS MADE IN THE FIELD OF NUCLEAR SAFETY

Short description of the Nuclear Installation

Lithuania operates the Ignalina Nuclear Power Plant (INPP) with two RBMK-type reactors with a nominal capacity of 1500 MW each.

COMMITMENTS TOWARDS THE EUROPEAN UNION

Europe Agreement

The Association Agreement between the European Communities, the Member States and Lithuania was signed on 12 June 1995 and entered into force upon the decision of the Council and the Commission of 19 December 1997 (98/150/EC, ECSC, Euratom).

"Article 70, Approximation of laws:
The approximation of laws shall extend to the following areas in particular: customs law, company law, banking law, company accounts and taxation, intellectual property, financial services, rules on competition, protection of health and life of humans, animals and plants, protection of workers including health and safety at work, consumer protection, indirect taxation, technical rules and standards, nuclear law and regulation, transport, telecommunications, environment, public procurement, statistics, product liability.

Article 81, Energy:
2. The co-operation shall focus on the following in particular:
- Formulation and planning of energy policy, including long-term aspects,
- ….
- The nuclear energy sector, in particular nuclear safety,
- ….
- Transfer of technology and know-how
- ….

Article 82, Nuclear Safety:
1. The aim of co-operation is to provide for a safer use of nuclear energy.
2. Co-operation in the nuclear field shall mainly cover the following topics:
- Industrial measures to upgrade the safety of the Lithuanian nuclear power plants,
- Evaluation of the feasibility of improving the safety of the existing power plant in Ignalina,
- Upgrading of staff training,

- Upgrading of Lithuania's laws and regulations on nuclear safety and strengthening of the supervisory authorities and their resources,
- Nuclear safety, preparation for nuclear emergencies and accident management,
- Radiation protection, including environmental radiation monitoring,
- Fuel cycle problems, safeguarding and physical protection of nuclear materials,
- Radioactive waste management,
- Decommissioning and dismantling of nuclear installations,
- Decontamination,
- Establishment of uniform safety standards to protect the health of workers, the general public and the environment and ensuring that they are applied.

3. Co-operation will include the exchange of information and experience and R&D activities in accordance with the provisions on science and technology.

4. The Parties agree on the necessity of making efforts to co-operate, within the framework of their respective powers and competences, in order to combat nuclear smuggling. Co-operation in this area should include exchange of information, technical support for analysing and identifying the material, and administrative and technical assistance for the installation of efficient customs controls. Further co-operation in this field could be identified as need arises."

Association Council

At the meeting of the Association Council of 15 February 2000, the Lithuanian authorities presented the National Energy Strategy and its implementation. The EU Presidency addressed the issue of nuclear safety as follows: "I would like to welcome the Lithuanian Parliament's adoption of a National Energy Strategy that foresees the closure and decommissioning of the Ignalina NPP. This is, certainly, a first important step. Unit 1 will be closed before 2005. With regard to Unit 2, considering the Lithuanian authorities' intention to determine its closure date by the 2004 National Energy Strategy and based on the age difference of both units and other technical date, closure should occur by 2009 at the latest."

Association Committees, Working Groups, bilateral contacts

The European Commission routinely addresses the issue of nuclear safety and the preparation of the decommissioning of the Ignalina NPP in various instruments of the European Union's bilateral dialogue with Lithuania. In the more recent past, such occasions arose at the meeting of the Sub-Committee on Energy, Transport and Environment on 14 December 1999, at numerous meetings of the Joint EC-Lithuanian Working Group on Energy, and in the course of the preparation of the Donors' Conference held in Vilnius on 20/21 June 2000. Concrete matters were also addressed at the conference itself as well as in the preparation of the establishment of the Ignalina International Decommissioning Support Fund on 12 June 2000.

The Association Committee, at its meeting of 15 June 2000, addressed the issue of nuclear safety as follows (citations from the draft minutes):

"The Lithuanian delegation pointed out that after the adoption by Seimas of the National Energy Strategy in October 1999, the Action Plan on the implementation of

this strategy was drafted and is now under consideration. The Action Plan includes [……]measures related to definite closure and decommissioning of Unit 1 of Ignalina Nuclear Power Plant (INPP).

The EU delegation welcomed the adoption of the National Energy Strategy that foresees the closure and decommissioning of Ignalina NPP, as a first important step. In line with the Nuclear Safety Account Agreement, Unit 1 will be closed down before the year 2005. With regard to Unit 2, considering the Lithuanian authorities' intention to determine its closure date by the 2004 National Energy Strategy and based on the age difference of both units and other technical data, closure should occur by 2009 at the latest.

[……]

The Lithuanian delegation pointed out that the legal and technical preparations for closure and decommissioning of Unit 1 of INPP have started with the Law on Decommissioning of Unit 1 of INPP adopted by Seimas on 2 May 2000. This law foresees a decommissioning programme of Unit 1 to be adopted by the Government by 1 November 2000. The State-owned enterprise *Ignalina Nuclear Power* will be responsible for actual decommissioning of Unit 1 especially regarding the supervision of Unit 1 exploitation safety, radioactive waste management etc.

The draft Laws on Decommissioning Fund for INPP and Radioactive Waste Management Funding are prepared and are under discussion by interested institutions. Adoption of these laws is foreseen by the end of year 2000. The Law on Decommissioning Fund for INPP will determine the structure of the fund for decommissioning and the principles of its administration. The Law on Radioactive Waste Management Funding will define responsibilities and financing for the organisations involved in waste management, methods for the collection of the resources to cover on-going costs for the radioactive waste, spent nuclear fuel, management and dismantling of INPP.

As regards preparations for decommissioning, the Commission responsible for implementation of the National Energy Strategy provisions related to INPP was established on 29 February 2000. The Commission is also responsible for the organisation of a Donor Conference and for the administration of financial assistance so provided. The Donor Conference is to be held on 20-21 June 2000, for which presently a number of projects have been prepared: interim spent nuclear fuel storage; waste management and storage of long and short lived radioactive solid and liquid waste; waste incineration facilities; replacement of heating and steam plant and on restoration of INPP territory; fuel transportation from Unit 1 to Unit 2; final decommissioning of Unit 1.

The EU delegation welcomed the adoption of the Decommissioning law, as a first important step. The passing of this law has opened the way to hold the Donors' Conference in Vilnius on 20 and 21 June. It indicated that Decommissioning plan has to cover both reactors. The EU delegation stressed that, by promoting this Conference as well as the establishment of the Ignalina International Decommissioning Support Fund (to be managed by EBRD), the EU is honouring its commitment to assist Lithuania financially and to mobilise additional international financial support. In

particular, the Fund will support both the decommissioning work at the Ignalina Nuclear Power Plant and the necessary restructuring, upgrading and modernisation of the energy production, transmission and distribution sectors as well as the improvement of energy efficiency. […….] The EU delegation stressed the importance that the Lithuanian Government prepares the Decommission Programme to be approved by 1 November 2000. It will also stress that this**.**

The Lithuanian delegation pointed out that in nuclear safety further improvements were made by INPP and State Nuclear Power Safety Inspectorate (VATESI). On 27 January 2000, an Action Programme for Licensing Unit 2 of INPP was approved, thereby allowing for issuing the licence for 2002. Regarding implementation of the Program on nuclear safety improvement (SIP-2), from July 1999 until June 2000, INPP implemented 14 and reached 127 out of 160 measures. A British Company NNC was selected in February 2000 for a second independent shutdown system project, supported via Phare. On 22 March 2000, Seimas passed the Law on Mutual Agreement between the Government of Lithuania and TATENA that guarantees the ratification of an Additional Protocol to Lithuania's agreement on nuclear material safeguards.

The EU delegation welcomed the fact that, at present, a significant number of recommendations resulting from the performance of the comprehensive Safety Analysis Report for Ignalina NPP have already been addressed. […….] The EU delegation also stressed the importance of installing the Diverse Second Shutdown System on Unit 2 as planned. The EU delegation underlined the importance of ensuring adequate safety levels during the remaining use of the Ignalina NPP."

UNILATERAL UNDERTAKINGS

National Energy Strategy

The current National Energy Strategy was adopted by the Lithuanian Parliament on 5 October 1999. It contains a commitment to close and decommission the Ignalina NPP. This closure commitment is phrased as follows:

"Upon comprehensive assessment of technical, economic and political factors, the following strategy for further operation of the Ignalina NPP is proposed: In line with the Nuclear Safety Account Agreement, Unit 1 of the Ignalina NPP will be closed down by the year 2005 (*comment:* "by" and "before" are supposedly synonymous in the Lithuanian language), taking into consideration the terms and conditions of long-term and considerable financial assistance from the European Union, G-7 countries and other States as well as international financial institutions. The remaining operation period of Unit 1 must be used most efficiently and, in particular, during the implementation of the secondary shut down system at Unit 2. Due to the age difference between Unit 1 and Unit 2, the issue pertaining to the conditions and precise final date of the decommissioning of Unit 2 shall be solved in the updated National Energy Strategy prepared in the year 2004, when more detailed information on the operation of Unit 2 will be available."

Decommissioning Law for Unit 1

The Law on the Decommissioning of Unit 1 of the Ignalina NPP was adopted by the *Seimas* on 2 May 2000. With regard to the commitment to close and decommission the NPP, the law contains the following salient wording:

Article 3. Schedule and Conditions for the Decommissioning

1. The preparatory works for the decommissioning of unit 1 at INPP shall be finalised by 1 January 2005.
2. The exact date for the final shutdown of Unit 1 at INPP shall be decided by the Government of the Republic of Lithuania having considered the implementation of the Decommissioning Programme and the possibilities of its further financing by the Republic of Lithuania and international financial assistance funds.

Article 4. Planning for the Decommissioning

1. The Government of the Republic of Lithuania shall draft the Decommissioning Programme and approve it by 1 November 2000.

National Programme for the Adoption of the Acquis (2000)

Therein, the Lithuanian Government indicates the following intended steps of relevance to nuclear safety:

"In its Programme, the Government has provided for the following lines of action related to the energy sector: […..] (6) upgrading of the safety of the Ignalina Nuclear Power Plant, (7) preparation for the closure of the first unit of the Ignalina Nuclear Power Plant, (8) improvement of the process related to the radioactive waste management and the processing of radioactive waste in accordance with the international requirements.

On 1 January 1997, the Law on Nuclear Energy entered into force. On 12 January 1999, the Law on Radiation Safety was adopted. On 20 May 1999, the Law on the Management of Radioactive Waste was adopted. The three aforementioned laws form the legal basis for the use and regulation of nuclear energy in the Republic of Lithuania.

The management and the safety of the Ignalina Nuclear Power Plant have been further consolidated. On 24 March 1999, the Government approved an amended a draft Law on the Management of the Ignalina Nuclear Power Plant and repeatedly submitted it for the consideration of the Seimas. On 2 May 2000, the Seimas adopted the Law on Decommissioning of the First Unit of the Ignalina Nuclear Power Plant.

On April 7 1997, the Ministry of Economy approved the second Safety Improvement Programme SIP-2. When drafting the Programme, due consideration has been given to the Safety Analysis Report (SAR) of the Ignalina Nuclear Power Plant, as well as to the recommendations of its Independent Review (IR) and of the Ignalina Safety Panel (ISP). The Safety Analysis Report (SAR) indicated that the reactors of the

RBMK type of the Ignalina Nuclear Power Plant do not meet the established safety standards of western reactors, as they do not have a secondary shutdown system. In 2002, a new independent secondary shutdown system of the second reactor of the Ignalina Nuclear Plant will be introduced.

On 30 September 1997, Lithuania signed a number of new international agreements related to the nuclear sector: the Joint Convention on the Safe Management of the Utilised Fuel and Radioactive Waste, the Protocol of Amendments to the Vienna Convention on the Civil Responsibility for the Nuclear Hazard, the Convention on Additional Compensation for the Nuclear Hazard. On 11 March 1998, an Additional Protocol to Lithuania's Agreement on the Guarantees was signed. On 23 June 1998, the Seimas ratified the Energy Charter Treaty and the Protocol on Energy Efficiency and Related Aspects of Environmental Protection. At present, the Convention related to the measures to be taken in cases of a nuclear accident or other radiological emergency is being prepared for ratification.

On 29 February 2000, following a Resolution of the Government, a Commission responsible for the implementation of the provisions of the National Energy Strategy related to the Ignalina Nuclear Power Plant was established. The Commission is responsible for the organisation of a donor conference on the decommissioning of the Unit 1 of the Ignalina Nuclear Power Plant and for a continuous search of financial assistance. The Commission shall report to the Prime Minister on the works undertaken in preparation for the donor conference and on the search of financial resources once in month.

Short-Term Priorities

- to proceed with the implementation of National Energy Strategy;
- to begin technical and legal preparations for closing down Unit 1 of Ignalina NPP;

On 2 May 2000, the Seimas adopted the Law on Decommissioning of the First Unit of the Ignalina Nuclear Power Plant. Certain measures included in the Action Plan will outline the plan of closing down Unit 1 of Ignalina NPP. The implementation of this part of the Action Plan is co-ordinated by a special commission set up on the basis of the Government resolution. In the 2nd half of 2000, Ignalina NPP will submit the programme of closing down Unit 1, and the Seimas will approve the primary legislation on programme financing and radioactive waste management.

- to continue the enforcement of Ignalina NPP safety improvement programme SIP-2;

On 18 January 2000, a revised version of the SIP-2 programme was approved. Other measures of the SIP-2 programme will be further consistently enforced. In 2005, after the programme is finished, all other recommendations of the Safety Analysis Report (SAR) and Expertise (RSR) and Ignalina Safety Panel (ISP) will be enacted.

- to continue reinforcement of the institutions regulating nuclear power safety and organisations providing technical assistance;

- to establish a state owned company *Agency for Radioactive Waste Management;*

On 20 May 1999, the Seimas adopted the Law on Radioactive Waste Management that outlines the principles of radioactive waste management in Lithuania in compliance with the international practice and standards. According to this law from 1 January 2001 a special purpose enterprise *Agency for Radioactive Waste Management* will start functioning."

Accession negotiations on Chapter 14 "Energy", Position Paper

Negotiations on this chapter have not yet been opened with Lithuania. The Lithuanian Government has not yet presented its Position Paper.

POLITICAL EXPECTATIONS EXPRESSED BY THE EUROPEAN UNION

Accession Partnership (1999)

The Accession Partnership contains expectations defined by the Commission and adopted by the Council and identifies short- and medium-term priorities that the candidate country is expected to fulfil. These priorities derive from the dialogue held with the candidate country and the analysis undertaken through the Commission's Regular Report on the progress of the respective country towards accession. The Accession Partnership contains a strong political expectation on behalf of the European Union in the prioritisation of key tasks linked to the accession process.

With regard to nuclear safety, the energy chapter of the 1999 Accession Partnership laid down the following short- and mid-term priorities:
Short-term priorities:

- start implementing a comprehensive energy strategy in line with the NSA Agreement, in particular,
- start the legal and technical preparation for the definitive closure and decommissioning of the Ignalina Nuclear Power Plant Unit 1,
- …
- continue implementing the necessary improvements of nuclear safety resulting from the performance of the comprehensive Safety Analysis Report for the Ignalina NPP,
- continue strengthening the independence and technical capability of the nuclear safety authority,
- establish a radioactive waste management institution,
- ….

Medium-term priorities:

- continue implementation of a comprehensive energy strategy in line with the NSA Agreement, in particular starting the definitive closure and decommissioning of Unit 1 of the Ignalina NPP and completing the installation of a diverse second shut-down system in Unit 2,
- start a new comprehensive Safety Analysis Report for Unit 2,
- ...
- strengthen regulatory structures for nuclear safety and radiation protection.

Accession negotiations on Chapter 14 "Energy", Common Position

Negotiations on this chapter have not yet been opened with Lithuania.

COMMITMENTS TOWARDS OTHER BODIES

Nuclear Safety Account Agreement

On 10 February 1994, Lithuania entered into the "Grant Agreement (Ignalina Units 1 and 2 Nuclear Safety Project) among the European Bank for Reconstruction and Development as Administrator of Grant Funds provided by the Nuclear Safety Account, the Ignalina State Nuclear Power Plant and the Republic of Lithuania".

Adhesion to the Convention on Nuclear Safety

Lithuania signed the Convention on 22 March 1995. After ratification and deposition on 12 June 1996, Lithuania is bound by the Convention since 24 October 1996.

ROMANIA

COMMITMENTS MADE IN THE FIELD OF NUCLEAR SAFETY

Short description of the Nuclear Installation

Romania operates one CANDU-600 design 700 MW pressurised heavy water reactor at the Cernavoda-1 NPP. Cernavoda Unit 2 is under construction.

COMMITMENTS TOWARDS THE EUROPEAN UNION

Europe Agreement

The Europe Agreement between the European Communities, the Member States and Romania was signed on 1 February 1993 and entered into force on 1 February 1995.

The Agreement includes an Article on co-operation in nuclear safety (Article 80):

Article 80, Co-operation in the nuclear sector:

1. The aim of co-operation is to provide for a safer use of nuclear energy.
2. Co-operation shall mainly cover the following topics:
- Industrial measures for the operation safety of Romanian nuclear power plants,
- Upgrading training of management and other personnel of nuclear installations,
- Upgrading Romania's laws and regulations on nuclear safety and strengthening the supervisory authorities and their resources,
- Nuclear safety, nuclear emergency preparedness and management,
- Radiation protection, including environmental radiation monitoring,
- Fuel cycle problems and safeguarding of nuclear materials,
- Radioactive waste management,
- Decommissioning and dismantling of nuclear installations,
- Decontamination.

3. Co-operation will include the exchange of information and experience and R&D activities in accordance with Article 76.

Association Council

Romania has not undertaken any commitment on nuclear safety within the framework of the Association Council established by the Europe Agreement.

Association Committees, Working Groups, bilateral contacts

Romania has not undertaken any commitment on nuclear safety within the framework of the Association Committees or of the Sub-Committees. However, during the last meeting of the Sub-committee on Transport, Trans-European Networks, Energy and Environment (6/7 July 2000), the Romanian authorities submitted a document which gives a complete presentation of the progress that Romania is making in adopting the acquis, confirming that Romania considers this issue a priority and is committed to developing a high-level of safety as regards nuclear questions. The full text is presented under annex 2.

UNILATERAL UNDERTAKINGS

National Energy Strategy

In 1998, Romania approved a new energy strategy (until 2020). The completion of the construction of unit 2 of Cernavoda is identified as a goal of this national energy strategy. The organisation and functioning of the nuclear energy sector is based on the Law 111/1996 (ROJ. No. 78 of 18 August 1998). The National Committee on Nuclear Activities Control is established as the nuclear safety regulatory authority.

National Programme for the Adoption of the Acquis (2000)

The Romanian NPAA 2000 mentions that nuclear safety remains a main priority of the Romanian energy policy, and identifies the following priorities:

Short term priorities:

- Finalisation of the implementation of the EU legislative acquis in the field of nuclear safety, nuclear energy activities, management of radioactive waste and spent fuel;
- Finalisation of reviewing process of the in the field of CNCAN (regulatory body) competence, such as: nuclear safety, safeguards, physical protection, quality assurance, radioactive waste management;
- Continuing the consolidation process for technical independence of CNCAN.

CNCAN has established the following associated short-term priorities:
- finalisation of transposing the acquis communautaire in the field of radiation protection, emergency preparedness and environmental radioactivity surveillance;
- automatisation of Network for Environmental Radioactivity in order to accomplish the requirements included in Art. 35 and 36 of the Euratom Treaty.

Medium term priorities:

- Completion of construction and commissioning of Unit 2 at the Cernavoda NPP
- Maintain a high level of security standards at the Cernavoda NPP
- Implementation of the legislative framework required to transfer extending of CNCAN responsibilities by designation of notified bodies in the nuclear field.

Accession negotiations on Chapter 14 "Energy", Position Paper

Negotiations on this chapter have not yet been opened with Romania. The Romanian Government has not yet presented its Position Paper.

POLITICAL EXPECTATIONS EXPRESSED BY THE EUROPEAN UNION

Accession Partnership (1999)

The Accession Partnership contains expectations defined by the Commission and adopted by the Council and identifies short- and medium-term priorities that the candidate country is expected to fulfil. These priorities derive from the dialogue held with the candidate country and the analysis undertaken through the Commission's Regular Report on the progress of the respective country towards accession. The Accession Partnership contains a strong political expectation on behalf of the European Union in the prioritisation of key tasks linked to the accession process.

With regard to nuclear safety, the Accession Partnership 1999 laid down the following priorities:

Medium-term priorities:
- Continue to ensure high standards of nuclear safety at the Cernavoda NPP.

Accession negotiations on Chapter14 "Energy", Common Position

Negotiations on this chapter have not yet been opened with Romania.

COMMITMENTS TOWARDS OTHER BODIES

Adhesion to the Convention on Nuclear Safety

Romania signed the Convention on 20 September 1994. After ratification and deposition on 1 June 1995, Romania is bound by the Convention since 24 October 1996.

In addition to being party to the Convention on Nuclear Safety, Romania has entered into a variety of international agreements, treaties and conventions on nuclear safety.

SLOVAKIA

COMMITMENTS MADE IN THE FIELD OF NUCLEAR SAFETY

Short description of the Nuclear Installation

Slovakia operates two Nuclear Power Plants, at Bohunice and Mohovce. At Bohunice there are four units in operation: two VVER 440/230 reactors (twin units 1 and 2 at Bohunice V1) and two VVER 440/213 (twin units 3 and 4 at Bohunice V2). The reactor Units at Mohovce are also of the VVER 440/213 type.

COMMITMENTS TOWARDS THE EUROPEAN UNION

Europe Agreement

The Association Agreement between the European Communities, the Member States and Slovakia was signed on 4 October 1993 and entered into force on 1 January 1995. Articles 77 and 78 of the Association Agreement (Europe Agreement) address the issues of energy and nuclear safety respectively. The provisions of these articles encourage co-operation between Slovakia and the EU in the nuclear field, in particular in the following areas:

- nuclear safety, nuclear energy preparedness and accident management;
- radiation protection, including environmental radiation monitoring;
- fuel cycle problems, safeguarding of nuclear materials;
- radioactive waste management;
- decommissioning and dismantling of nuclear installations
- decontamination

Association Council

During the latest Association Council held in Brussels on 23 May 2000, the EU recalled the Cologne Council conclusions, reiterated at Helsinki, which emphasise the importance of high standards of nuclear safety in Central and Eastern Europe. It also noted the commitment of the Slovak Government to close units 1 and 2 at Bohunice V1 by 2006 and 2008 respectively.

Association Committees, Working Groups, bilateral contacts

In the framework of the latest Association Committee held in Bratislava on 16 December 1999, the EU stressed the importance to make every effort to ensure a high level of nuclear safety and environmental protection as reflected in relevant Council conclusions. It also stressed the importance of continuing the strengthening of the Slovak nuclear regulator.

During 2000, a number of meetings have taken place between Slovak and Commission officials in order to prepare the first phase on the implementation of the Bohunice V1 decommissioning process. These contacts will continue and will also include the EBRD, as manager of the "Bohunice International Decommissioning Support Fund". This Fund has been set up to provide assistance to the Slovak authorities in the decommissioning process of Bohunice V1. The EU will participate in this Fund.

UNILATERAL UNDERTAKINGS

National energy strategy

The Slovak Energy Policy adopted in January 2000 includes a section on Nuclear Energy. As regards nuclear safety, it indicates that a programme has been prepared for the upgrading and further increase of nuclear safety at Bohunice V2. This programme covers the period 2001 – 2008, and is in compliance with the requirements of the Slovak Nuclear Authority and the latest recommendations of the International Atomic Energy Agency. This upgrading programme includes the increase of V2 units' capacity and the extension of the designed operating period.

The Slovak Energy Policy also refers to the decision taken by the Slovak Government in September 1999 (Government Resolution No.801/99) to shut down units 1 and 2 at Bohunice V1 (VVER-440/230 reactors) in 2006 and 2008 respectively.

Closure commitment with regard to Bohunice V1

As indicated above, in September 1999 the Slovak Government adopted Resolution No.801/99 to shut down the two VVER 440/230 units of nuclear power plant Bohunice V1, in 2006 and 2008 respectively.

National Programme for the Adoption of the Acquis (2000)

The chapter "Energy" of the Slovak NPAA for the year 2000 gives great importance to nuclear safety. Priorities include:

Short term

- to prepare a plan to halt operation with the aim of implementing the Government's decision on the shutdown of units 1 and 2 at the Bohunice V1 NPP nuclear power plant.

- to complete the reconstruction of Bohunice V1 NPP with the aim of achieving an acceptable standard of nuclear safety.

- to continue to ensure a high standard of nuclear safety at Bohunice V1 NPP and Mochovce NPP under the oversight of the Slovak Nuclear Regulatory Authority.s.

Medium Term

- to complete the preparation of programmes to improve the safety of Bohunice V2 NPP and Mochovce NPP.

- to further specify the requirements of the Slovak oversight body – the Slovak Nuclear Regulatory Authority – on the modernisation programme for Bohunice V2 NPP with regard to nuclear safety.

- to prepare a general plan and the licensing work related to the shutdown of units 1 and 2 at Bohunice V1 NPP.

- to reinforce the regulatory structures in charge of nuclear safety and radiation protection.

Accession negotiations on Chapter 14 "Energy", Position Paper

Negotiations on this chapter have not yet been opened with Slovakia. The Slovak Government has not yet officially submitted its Position Paper.

POLITICAL EXPECTATIONS EXPRESSED BY THE EUROPEAN UNION

Accession Partnership (1999)

The Accession Partnership contains expectations defined by the Commission and adopted by the Council and identifies short- and medium-term priorities that the candidate country is expected to fulfil. These priorities derive from the dialogue held with the candidate country and the analysis undertaken through the Commission's Regular Report on the progress of the respective country towards accession. The Accession Partnership contains a strong political expectation on behalf of the European Union in the prioritisation of key tasks linked to the accession process.

The following nuclear safety-related actions have been identified as short and medium term priorities under the Accession Partnership for Slovakia :

- Short Term Priorities

- prepare a decommissioning plan to implement the government decision to close the Bohunice V1 nuclear reactors,

- continue to ensure high levels of nuclear safety at Bohunice V2 and Mochovce nuclear power plants.

- Medium Term Priorities

- complete safety upgrading programmes at Bohunice V2 and Mochovce nuclear power plants,

- prepare and implement overall planning and licensing work for the decomissioning of Bohunice V1 NPP,

- strengthen regulatory structures for nuclear safety and radiation protection.

Accession negotiations on Chapter 14 "Energy", Common Position

Negotiations on this chapter have not yet been opened with Slovakia

COMMITMENTS TOWARDS OTHER BODIES

Adhesion to the Convention on Nuclear Safety

Slovakia signed the Convention on 20 September 1994. After ratification and deposition on 7 March 1995, Slovakia is bound by the Convention since 24 October 1996.

SLOVENIA

COMMITMENTS IN THE FIELD OF NUCLEAR SAFETY

Short description of the Nuclear Installation

Slovenia operates the Krško Nuclear Power Plant with one Westinghouse-designed pressurised water reactor of 664 MW capacity. The plant is jointly owned with Croatia.

COMMITMENTS TOWARDS THE EUROPEAN UNION

Europe Agreement

The Association Agreement between the European Communities, its Member States and Slovenia was signed on 10 June 1996.

Article 81 of the Europe Agreement, which concerns Nuclear Safety, reads as follows:
"1. The aim of cooperation on nuclear safety shall be to provide for a high level of nuclear safety.
2. Cooperation, as appropriate to the Slovenian specific situation, shall cover the following:

- nuclear safety including both regulatory and operational aspects and serious accident management;
- protection against radiation, including monitoring radiation in the environment;
- fuel cycle problems and safeguarding of nuclear materials, including measures against nuclear smuggling;
- radioactive waste management;
- early exchange of information in case of radiological emergencies;
- decommissioning of nuclear facilities;
- nuclear third party liability.

3. Cooperation shall include the exchange of information and experience and R&D activities in accordance with Article 77."

Association Council

At the last session of the Association Council with Slovenia, on 14 June 2000, the EU included the following in its statements: "The Union highlights the importance of establishing an effective independent nuclear regulatory authority and of continuing to ensure high levels of nuclear safety (taking account of seismic risk assessment) at the Krško NPP."

Association Committees, Working Groups, bilateral contacts

Association Committee

At the last session of the Association Committee with Slovenia, on 23 March 2000, the EU Delegation requested updated information from Slovenia on the current state of play as regards bilateral relations with Croatia, notably on the resolution of outstanding issues relating to ownership of the Krško nuclear plant.

The EU Delegation also requested information on the current nuclear policy and investment plans in line with the results of the seismic risk assessment being carried out in the surroundings of the Krško NPP. The Slovenian Delegation informed on the progress of the seismic investigation of the Krsko site. The EU Delegation also emphasised the importance of the strengthening of the nuclear safety authority.

UNILATERAL UNDERTAKINGS

National Programme for the Adoption of the Acquis (2000)

Slovenia's NPAA 2000 contains the following commitments in the area of nuclear safety:

"The field of safeguards relating to nuclear material is largely in conformity with the *acquis*. The Protection against Ionising Radiation and Special Safety Measures in the Use of Nuclear Power Act and Rules on keeping records of nuclear materials are in force. In 1997, Slovenia ratified the "Agreement between the Republic of Slovenia and the IAEA for the application of safeguards in connection with the Treaty on non-proliferation of nuclear weapons". An additional Protocol to this Agreement was signed in 1998. The alignment will be completed by the time of accession to the European Union, i.e. when Slovenia will have entered into the same type of agreement with the IAEA as applies to other non-nuclear weapon EU Member States and when it complies with the "Commission Regulation concerning the application of the provisions on Euratom safeguards No 3227/76".
Conditions for the purchase of materials for nuclear fuel are provided by the Protection against Ionising Radiation and Special Safety Measures in the Use of Nuclear Power Act. The contracts, which the only Slovenian nuclear power plant at Krško has concluded, concern supply of uranium hexafluoride until 2000 and services relating to the enrichment and fabrication of fuel elements until 2005.
Slovenia has concluded international agreements in the area of peaceful use of nuclear energy, exchange of technical information, nuclear safety and bilateral agreements on the early exchange of information. In addition, Slovenia has joined several international conventions related to the subject field. Recently (1999 and 2000), bilateral agreements on the early exchange of information have been concluded with Slovakia, South Africa, South Korea and France.
Investment in mixed enterprises and reporting on the construction of new nuclear facilities are regulated by the Protection against Ionising Radiation and Special Safety

Measures in the Use of Nuclear Power Act and Rules on the conditions for siting, construction, trial run, start-up and use of nuclear facilities. "

Accession negotiations on Chapter 14 "Energy", Position Paper

In its initial negotiation position of 1 June 1999 (CONF-SI 27/99), Slovenia indicated the following:

"13.d. Investment in mixed enterprises and reporting on the construction of new nuclear facilities

Existing legislation in the Republic of Slovenia

In the Republic of Slovenia, the construction of nuclear facilities and related reporting is regulated by:

- Act on Protection against radiation and the safe use of nuclear power (Ur. L. SFRJ, st. 61/84) and
- Regulations E1 (Regulations on the conditions for the sitting, construction, text operation, start-up and operation of nuclear facilities – Ur. L. SFRJ, 52/88)

Harmonisation of legislation with the *acquis*

The Republic of Slovenia will implement "Regulation No1 which requires reporting on new investment projects in the field of nuclear energy and energy production (Article 41 of Euratom). In fact, these reports are already available and are contained in the "Final Safety Report" which is a public document. The Republic of Slovenia will also communicate to the Commission all investment projects (modifications, the investment value of which exceeds a certain amount) made in nuclear facilities which are to be communicated as requested in Article 41 of Euratom.

Institutional framework for implementing the harmonised legislation

The Republic of Slovenia has in place the institutions necessary for implementing the harmonised legislation in the field of radiation protection and nuclear safety. These institutions are the Nuclear Safety Authority operating under the Ministry of Environment and Physical Planning and the Ministry of Economic Affairs. For the need of the above-mentioned tasks, the Republic of Slovenia will strengthen the staffing and professional capacity of these institutions."

In Additional Clarifications submitted on 6 December 1999 (CONF-SI 68/99), Slovenia indicated notably that:

"Nuclear Energy

(…)

With regard to the Conclusions of the Council of 7 December 1998 on nuclear safety in the context of EU enlargement, the Republic of Slovenia underlines that it fully agrees with the conclusions. Favourable assessment of nuclear safety in Slovenia were published in the Strategic View for the Future of the European Union's Phare and Tacis Programmes prepared by the Panel of High-Level Advisors on Nuclear Safety in CEE and in the New Independent States in August 1998, and in the Report on Nuclear Safety in EU Applicant Countries prepared by the Western European Nuclear Regulators' Association in March 1999.

With regard to seismicity of the Krško field, the preparation of a special study is underway in the framework of the Phare programme.

The Republic of Slovenia is aware of the importance of providing high level of nuclear safety and environmental protection and is prepared to report regularly (half-yearly) on: the upgrading programme for the Nuclear Power Plant, investment in nuclear fuel cycle, spent fuel and waste management, the progress on seismic analysis, and the activities of the relevant administrative authority. First such information will be provided by 31 December 1999.

The Republic of Slovenia reassures the European Union that the dual ownership the Nuclear Power Plant Krško with the Republic of Croatia does not present any threat to the safety of its operations, which may also be confirmed by the purchase of two newest Siemens steam generators which will ensure efficient and safe operating of the nuclear power plant also in the future."

Slovenia has repeatedly provided additional information on nuclear safety issues.

POLITICAL EXPECTATIONS EXPRESSED BY THE EUROPEAN UNION

Accession Partnership (1999)

The Accession Partnership contains expectations defined by the Commission and adopted by the Council and identifies short- and medium-term priorities that the candidate country is expected to fulfil. These priorities derive from the dialogue held with the candidate country and the analysis undertaken through the Commission's Regular Report on the progress of the respective country towards accession. The Accession Partnership contains a strong political expectation on behalf of the European Union in the prioritisation of key tasks linked to the accession process.

The Accession Partnership considered as a medium-term priority that Slovenia should continue to ensure high levels of nuclear safety (taking account of seismic risk assessment) at the Krško Nuclear Power Plant.

Accession negotiations on Chapter 14 "Energy", Common Position

In its Common Position (CONF-SI 56/99), the European Union took the following stance with regard to nuclear energy issues:

"Slovenia is invited to confirm its full acceptance and application by accession of the "acquis" in this sector (including the Euratom Treaty, secondary legislation in areas such as nuclear safeguards and supply and international nuclear agreements). Slovenia is also invited to confirm that it is willing to terminate its agreement with Canada and to replace it by the Euratom agreement with Canada upon accession.

Concerning nuclear safeguards, Slovenia is invited to confirm its full acceptance of the "acquis" as laid down in the Euratom Treaty and Regulation 3227/76/EEC, and in particular that it is willing to accept that accountancy reports are sent by the operator directly to Euratom.

The EU recalls the General EU Position on the importance of the objective of a high level of nuclear safety and environmental protection, as reflected in relevant Council Conclusions. The EU is determined to keep under close review throughout the accession process the issues covered therein.

Therefore, Slovenia is invited to provide comprehensive and regular information on the ongoing upgrading programme for the Krško nuclear power plant, on investments in the nuclear fuel cycle, including spent fuel and waste management, and the associated financial provisions including state funds, to report on progress of the seismic analysis, on how Slovenia intends to manage safety issues in the context of the dual Slovenian-Croatian ownership of the plant, as well as on the strengthening of the safety authority and its work.

Recalling that responsibility for the safe design, construction and operation of a nuclear installation rests with the Member State having jurisdiction over such an installation, Slovenia is encouraged to implement measures along the lines of the Council Conclusions referred to above.

As far as radiation protection and nuclear waste are concerned, these issues will be dealt with under chapter 22 Environment."

COMMITMENTS TOWARDS OTHER BODIES

Adhesion to the Convention on Nuclear Safety

Slovenia signed the Convention on 20 September 1994. After ratification and deposition on 20 November 1996, Slovenia is bound by the Convention since 18 February 1997.