# **CONCLUDING STATEMENT**

## ON THE NEGOTIATIONS HELD ON 29 NOVEMBER 2001 BETWEEN THE CZECH AND AUSTRIAN GOVERNMENTS LED BY PRIME MINISTER ZEMAN AND FEDERAL CHANCELLOR SCHÜSSEL WITH THE PARTICIPATION OF COMMISSIONER VERHEUGEN ON THE

#### "CONCLUSION OF THE MELK PROCESS AND FOLLOW-UP"

The Republic of Austria and the Czech Republic have, using the good offices of Commissioner Verheugen, reached an accord on the annexed "Conclusions of the Melk Process and Follow-up". They have agreed to communicate this agreement, in an appropriate form, to the Accession Conference.

Prime Minister Milos ZEMAN

Federal Chancellor Wolfgang SCHÜSSEL

**Commissioner Günter VERHEUGEN** 

# **Conclusions of the Melk Process and Follow-up**

#### Preamble Preamble

With the aim of further developing good-neighbourly relations between the Czech Republic and the Republic of Austria, a "Protocol on the Negotiations between the Czech and the Austrian Governments, led by Prime Minister Zeman and Federal Chancellor Schüssel with the Participation of Commissioner Verheugen" was signed in Melk on 12 December 2000, further referred to as the 'Melk Protocol'.

The signatories of the 'Melk Protocol' found it appropriate to meet in Brussels on 29 November 2001 to define a follow-up to the process set forth in the Protocol mentioned above.

The signatories agree that the process started in Melk has led to an improvement in the exchange of information on the Temelín Nuclear Power Plant thus creating prerequisites for more confidence between the Czech Republic and Austria within an intensive dialogue on nuclear energy.

The signatories agree on the usefulness to open expert talks on amending the existing bilateral Agreement on the Exchange of Information on Nuclear Safety, concluded between the two states in 1989 so as to correspond to the achieved level of confidence and the needs of the signatories, including a reliable Info-Hotline.

Respecting the sovereign right to select their own energy policy, the two countries share their interest in a high level of nuclear safety of nuclear installations. The Czech side recognises the specific interest of the Republic of Austria as a neighbouring state in a high level of safety of Czech nuclear power plants.

The Czech Republic is exclusively committed to the provisions of Vienna Convention on Civil Liability for Nuclear Damage and Joint Protocol to the application of the Vienna Convention and the Paris Convention. The Republic of Austria is fully committed to the Austrian Nuclear Liability Act of 1999.

#### Chapter I - Info-Hotline

The Info-Hotline was installed immediately after the negotiations in Melk and its functionality is positively assessed by the signatories.

The Czech side has been providing information also on putting into operation the nonnuclear part of the first unit as well as information on the second unit of the Temelín NPP.

The Czech Republic and Austria agree that the Info-Hotline constitutes a useful measure, also with regard to nuclear and non-nuclear testing of both units, that its functionality will be regularly assessed within the bilateral Agreement on Information Exchange and that, if needed, measures will be taken to increase its effectiveness.

#### Chapter II - Early Warning System

An automatic monitoring device in České Budějovice provided by Austria was installed on April 24, 2001 and the supply of data on radiation levels from the monitoring network continues without any problem.

The signatories agree that this measure fully meets its purpose and will remain in operation.

With a view to establishing a regional network in the long-term, which could be included into ECURIE, the possibilities of exchanging data with other national monitoring networks will be explored.

## Chapter III - Energy Partnership

The Czech Energy Agency has been co-operating with the Austrian Energy Agency in the fields of energy efficiency and reconstruction of tenement houses, exploitation of renewable energy sources and the use of co-generation units. The signatories will make further efforts to intensify this co-operation.

## Chapter IV - Safety Issues

The Czech and the Austrian side appreciate the role played by the European Commission in establishing and facilitating a "trialogue", launched to find a better mutual understanding on the issue of the Temelin NPP related to nuclear safety.

During the process, twenty-nine issues of Austrian concern have been identified. All of them were documented and addressed. The expert mission under the Melk Protocol regarded nine issues as closed, meeting the purpose of the Melk process. Due to the nature of the respective topics, the expert mission found another ten issues suitable to be followed-up in the framework of the pertinent Czech-Austrian Bilateral Agreement. Finally, the Melk process helped to narrow gaps in the understanding of remaining ten issues.

Even if it was not possible to reach an agreement on all the technical issues at stake, all participants agreed that the aim foreseen in Melk, namely to facilitate the dialogue between the Czech and Austrian governments, has been achieved.

In order to enable an effective use of the Melk process achievements in the area of nuclear safety, the Annex I to this Protocol contains details on:

- Process and documentation of the "trialogue"
- Specific actions to be taken as a follow-up to the "trialogue" in the framework of pertinent Czech-Austrian Bilateral Agreement.

The signatories are fully aware of the AQG/WPNS Report on Nuclear Safety in the Context of Enlargement, in particular the recommendations pertaining to the NPP Temelín contained therein. The signatories agree that the peer review procedure foreseen by the EU to monitor the implementation of the recommendations should serve as another important tool to handle remaining nuclear safety issues.

Furthermore, the Czech Republic and Austria agree to intensify bilateral co-operation on emergency preparedness.

## Chapter V - Environmental Impact Assessment

With the 'Melk Protocol' the signatories agreed on a comprehensive and full-scope environmental impact assessment of the Temelín NPP guided by the Council Directive on the assessment of the effects of certain public and private projects on the environment (Council Directive 85/337/EEC as amended by Council Directive 97/11/EC), in particular with regard to the participation of neighbouring countries.

To this end, a four-member Commission on the Assessment of Environmental Impact of the Temelín NPP was set up on the basis of a resolution of the Government of the Czech Republic.

The Commission on the Assessment of Environmental Impact of the Temelín NPP presented a report and recommended in its Position the implementation of twenty-one concrete measures (Annex II).

The signatories agree that the implementation of the said measures will be regularly monitored jointly by Czech and Austrian experts within the bilateral Agreement on the Exchange of Information.

Furthermore, the Czech Republic and Austria agree to intensify bilateral co-operation on emergency preparedness.

## Chapter VI - Commercial Operation

Unit 1 and 2 of the Temelín NPP will only be put into commercial operation following the successful termination of commissioning and trial run. During these stages all tests prescribed by the programmes approved by the State Office for Nuclear Safety and required by the Czech legislation have to be performed and all relevant criteria corresponding to the state-of-the-art safety criteria prevailing in the Member States of the European Union have to be fulfilled, including this Protocol. In any case the implementation of those safety measures enumerated in Annex I, which are conditional for the safe operation of the NPP Temelín in line with Czech legislation, is a prerequisite of commercial operation.

## Chapter VII - Free Movement of Goods and Publicity in the Media

The signatories positively assess the efforts to maintain and respect free movement of goods and persons. The signatories agree also in this respect to continue to honour their pertinent commitment of the "Melk Protocol".

## Chapter VIII - Enlargement

Based on the understanding that the Czech Republic will inform the Accession Conference comprehensively of the technical and procedural substance as well as of the binding character of this document and based on the understanding that the common position of the EU on the Energy Chapter will adequately reflect the information to the Accession Conference mentioned above, the Republic of Austria will agree to contribute constructively to start the next steps for the Energy Chapter as foreseen in the "road map" of Nice in order to start the implementation of the Protocol.

## **Closing provisions**

The signatories shall – irrespective of the ownership of the NPP Temelín – guarantee the implementation of the conclusions of this Protocol in accordance with domestic legal regulations of the Czech Republic and international agreements.

The signatories state that the implementation of specific steps of this "Conclusions of the Melk Process and follow-up" will be monitored by the Deputy Prime Minister and Minister of Foreign Affairs of the Czech Republic and the Minister of Agriculture and Forestry, Environment and Water Management of the Republic of Austria.

A "road map" regarding the monitoring on technical level in the framework of the pertinent Czech-Austrian Bilateral Agreement as foreseen in this Protocol will be elaborated and agreed by the Deputy Prime Minister and Minister of Foreign Affairs of the Czech Republic and the Minister of Agriculture and Forestry, Environment and Water Management of the Republic of Austria by 10 December 2001 at the latest.

In accordance with the importance attached by the EU to nuclear safety, as underlined by the European Council in Cologne and Helsinki, both sides will actively support and promote a high level of nuclear safety in the enlarged EU.

Austria and the Czech Republic agree on the common objective to include the bilateral obligations contained in these "Conclusions" in a Protocol to the Accession Act.

Brussels, 29 November 2001

## Annex I

According to the Chapter IV of the Protocol, the parties established "an expert mission with trilateral participation" which was dispatched first to Vienna, on 2 February 2001, to identify the Austrian main issues of concern. During a subsequent mission to Prague and the Temelin NPP, on 15 and 16 March 2001, the same expert mission heard the explanations given by representatives of the Czech Republic on these issues of concern. Five issues of major concern to Austria were selected and discussed in depth. Two additional workshops were organised by the Czech side in February and in April to accommodate specific technical issues. An IAEA Operational Safety Review Team mission lasting for three weeks in February 2001 reviewed the operational safety of the plant. The conclusions were presented to the trilateral expert mission. A final joint meeting took place in Brussels, on 14 and 15 May 2001, in order to find solutions to the identified problems, on the basis of the state-of-the art relevant in the Member States of the European Union. A final discussion between heads of delegation took place in Brussels on 30 May 2001, at the request of the Austrian side.

This process is documented in a Working Paper Summarising the outcome of the Expert Mission with Trilateral Participation Established Under the Melk Protocol (July 2001). It has been drafted under the sole responsibility of European Commission experts involved in the process. It summarises the work of the tripartite mission. For each of the twenty-nine issues of concerns identified, this paper provides a summary of the discussions that have taken place. To limit the size of this paper recording the positions of the parties, these have been summarised. The summaries therefore do not always present the full scope of the concerns expressed or the details of the information provided.

To enable an effective "trialogue" follow-up in the framework of pertinent Czech-Austrian Bilateral Agreement, a seven-item structure given below will be adopted. Individual items are linked to:

- Specific objectives set in licensing case for NPP Temelin units;
- Description of present status and future actions foreseen by the licensee and SUJB respectively.

Each item under discussion will be followed according to the work plan agreed at the Annual Meeting organised under the Czech-Austrian Bilateral Agreement.

Having in mind the peer review procedure foreseen by the EU to monitor the implementation of the recommendations of the AQG/WPNS Report on Nuclear Safety in the Context of Enlargement the Czech and Austrian side understand that the first two items below in particular would be subject to this peer review procedure.

Item No.1	High Energy Pipe Lines at the 28.8 m Level
	(AQG/WPNS country specific recommendation)

Objective:

Ensure that the safety case demonstrating appropriate protection against high energy pipe breaks and consequential failures of the steam and feed water lines, complies with requirements and practices widely applied within the EU and that an appropriate combination of measures are in place. Present Status and Specific Actions Planned:

The issue of protection against high energy pipe breaks and consequential failures of the steam and feed water lines is included in the existing licensing case of Temelin unit No.1. To solve the difference in opinions of experts with regard to this issue, the Regulatory Authority initiated revisit of the safety case documentation in order to re-evaluate its compliance with requirements and practices widely applied in the EU. Alternative methods of assessment are being applied for this purpose as well as data collected during unit No. 1 commissioning tests. The result of these efforts will be made available to the Regulatory Authority till the end of September 2002 for final decision. Depending on the result, schedule for implementation of additional safety measures may be included into the above - mentioned regulatory submittal<sup>1</sup> The signatories understand that additional safety measures for both units will be considered by the Regulatory Authority and if needed included into the above mentioned regulatory decision in order to meet the objective of this item.

# <u>Item No.2</u> <u>Qualification of Valves</u> (AQG/WPNS country specific recommendation)

Objective:

Demonstration of reliable function of key steam safety and relief valves under dynamic load with mixed steam-water flow.

Present Status and Specific Actions Planned:

Demonstration of reliable function of key steam safety and relief valves is included in original licensing case of Temelin unit No. 1. To solve the difference in opinions of experts with regard to this issue, the Regulatory Authority initiated revisit of the qualification documentation in order to re-evaluate validity of Temelin key steam safety valves qualification. The result of these efforts will be made available to the Regulatory Authority till the June 2002 for final decision. Depending on the result, schedule for implementation of additional safety measures may be included into the above-mentioned regulatory submittal<sup>1</sup>. The signatories understand that additional safety measures for both units will be considered by Regulatory Authority and if needed included into the above - mentioned regulatory decision in order to meet the objective of this item.

# Item No.3 Reactor Pressure Vessel Integrity and Pressurised Thermal Shock

Objective:

The reactor pressure vessel (RPV) integrity under pressurised thermal shock (PTS) conditions shall be maintained with a sufficient safety margin against brittle fracture throughout the NPPs service life.

<sup>&</sup>lt;sup>1</sup> For details see Sixth Additional Information to the Position Paper on Chapter 14 "Energy" submitted to the EC in September 2001

Present Status and Specific Actions Planned:

The NPP Temelin is commissioned and operated respecting pressure-thermal (PT) curves calculations developed according to Westinghouse methodology. These calculations will be expanded with set of the further PTS analysis for both units using a step by step approach with full respect of the IAEA Guidelines for the PTS analysis. The PTS analysis will be finished in accordance with approved project work plan for this item.

# Item No. 4 Integrity of Primary Loop Components – Non Destructive Testing (NDT)

Objective:

Selected safety classified primary circuit components shall be inspected using certified NDT methods to maintain their safety function.

Present Status and Specific Actions Planned:

The NDT qualification programme is being applied in accordance with the European Network for Inspection Qualification (ENIQ), recommendations from the European regulators (document EUR 16802) and IAEA principles. The qualification of inspection procedures using test blocs will be conducted not later than its first application within the in-service inspection programme.

Item No. 5 Qualification of Safety Classified Components

Objective:

All safety systems shall be qualified for their dedicated safety function.

Present Status and Specific Actions Planned:

The seismic qualification is completed. The EMC (Electro Magnetic Compatibility) qualification is completed. Respective documentation is completed and filed. In the case of environmental qualification, all processes (tests and/or analyses) required by licensing procedure have been performed. Qualification of I&C and electrical supplies, which represent the majority of the equipment relevant for qualification, is documented and filed in a standard format. In a limited number of the cases (where the equipment was procured in the beginning of the nineties), regulatory authority requested a transfer of qualification documentation to standard format till the end of 2001. This submittal will be a subject to regulatory review and approval taking into account requirements for accessibility of documentation according to state-of-the-art standards.

Item No. 6 Site Seismicity

Objective:

Siting of the installation shall take into account seismic as one of the possible external hazards.

Present Status and Specific Actions Planned:

The NPP Temelin underwent a thorough siting procedure in relation to possible seismic hazards. The Czech standard for this procedure is based on IAEA recommendations. A set of written documentation was released prior and in course of the "trialogue" giving evidence of this process. Due to the complexity of this issue and in order to foster mutual understanding, a topical workshop will be organised in the frame of the bilateral co-operation.

Item No. 7 Severe Accidents Related Issues

Objective:

Effective prevention and mitigation of consequences of beyond design basis accidents (severe accidents).

Present Status and specific Actions Planned:

A set of preventive and mitigative measures is, at present, applied in NPP Temelin with respect to beyond design basis accidents. These include software and hardware measures, among others, e.g. Symptom Based Emergency Operating Procedures, Technical Support Centre, Post Accident Monitoring System, Emergency Preparedness.

For the purpose of emergency preparedness, the PSA was employed with the aim to identify and group events with different initiating occurrences, but with similar end-effects. On the basis of this assessment the relative risk was estimated for specific events in order to select those which will serve for the determination of emergency response activities (pre-planned, reactive).

Severe Accidents Management Guidelines (SAMG) as a state-of the-art tool will complete the whole system of mitigation measures with respect to the beyond design basis accident management. The project for SAMG development is scheduled to be finished by end 2002 to be followed by validation.

To foster mutual understanding two lines of activities will be followed within the framework of the bilateral agreement:

- a) A Working Group on comparison of calculations regarding the radiological consequences of BDBA with a view to harmonise the basis for emergency preparedness will be established.
- b) The exchange of information related to SAMG will include discussion on the analytical basis as well as on corresponding software and hardware measures.

## Annex II

With the target to minimise stress feelings mainly of the Austrian public, the Commission recommends (besides standard monitoring of the Temelín NPP Radiation Inspection Laboratory, standard monitoring within the national grid of the Czech Hydrometeorological Institute, respectively others) to ensure independent super-standard monitoring of the nuclear power plant operation wastes.

The optimal solution for super-standard measures is implementation of research task financed from the funds for science and research within the framework of the Czech Republic Governmental Council.

- 1. To establish a system for continuous informing of wide public both on current values of the factors affecting the environment as a consequence of the Temelín NPP operation (on-line outlets) and on development of time sequence of selected parameters of the environmental impacts monitoring (continuously updated diagrams, photos of the Earth remote examination, bio-monitoring results, and so on) as well as on other important facts (for instance earthquake in Alps indicated on seismological stations in South Bohemia, ...). All of these data would be shown on the Internet pages of the Temelín NPP, on publicly available monitors in Týn nad Vltavou and in České Bud jovice, and in the Temelín NPP information centre.
- 2. To ensure continuous measurement of gaseous radioactive outlets within the framework of the operating network of the investor of the Temelín NPP.
- 3. To continuously improve and modernise the existing radiation monitoring network operated by the state authorities of the Czech Republic.
- 4. To regularly inform the public in the Czech Republic, Austria and the Federative Republic of Germany on all measurements.
- 5. To permanently monitor the impacts of the Temelín NPP cooling towers on climate even in wider region (through the existing meteorological stations network of the Czech Hydrometeorological Institute).
- 6. To ensure independent and continuous monitoring of the Temelín NPP operation impacts in the following fields:
  - Assurance of supply and quality of drinking water from the point of view of the nuclear power plant as well as nuclear power plant impacts on the water resources in the Temelín NPP surroundings;
  - Assurance of supply and quality of technological water from the point of view of the nuclear power plant;
  - Impacts of emissions on water system and risk of radioactive pollution of the recipient as a consequence of tritium water and other water effluents, including assessment of temperature impacts, accumulation and synergic impacts of harmful substances (including eutrofisation) in Orlík water reservoir;
  - Impacts of emissions on atmosphere, verification of thermal pollution and evaporation of water on cooling towers;
  - Impacts on agricultural activities and forest economy.

- 7. To order elaboration of soil map of the nuclear power plant surroundings in a digital form for surface generalisation of the impacts on pedosphere (soil sphere) from the point of view of further dynamic development.
- 8. To ensure conditions for seismic monitoring (including establishment of the monitoring centre located within the Temelín NPP area, eventually in the Information Centre). The basic objective of this centre will be to inform the public, state organisational units and local municipal governments on earthquake impacts on the locality and on the surroundings of the Temelín NPP.
- 9. To guarantee continuous maintenance and restoration of all technical equipment and devices of the nuclear power plant in such a way to correspond with the up-to-date status of the technique development as well as with the knowledge in the field of seismic engineering.
- 10. To ensure determination of radioactive substances in surface water, underground water and drinking water resources as well as in the food basket elements within the programme of the Radiation Monitoring Network of the Czech Republic.
- 11. To create conditions for implementation of the health condition monitoring study of about 30,000 of inhabitants in the surroundings of the Temelín NPP by means of epidemiological and radiobiological methods (for instance using chromosome analysis).
- 12 To establish a concept of continuous sociological examination of the population within wider surroundings of the Temelín NPP, to create conditions for implementation of the proposed programmes and related measures in the field of informatics and cultural educational activities.
- 13. To discuss revitalisation of the area abound the Temelín NPP as a compensation for impacts on the Temelín NPP area surroundings during its construction, to discuss reverse revitalisation in damaged sectors of river basin including initiation of discussion on revitalisation system in the effected area of Stropnice river basin.
- 14. To ensure maintenance (mitigation of undesirable succession) on sub-xerophythe locations of the former military area of Litoradlice and on areas of valuable marshes around new retention reservoir in Strouha river basin.
- 15. To ensure monitoring of radionuclide accumulation in biological materials bryophyte, forest soil and pine bark and to maintain monitoring of radionuclides in fish.
- 16. To monitor impacts of waste and rain waters by means of separate chemical and biological monitoring
  - In Býšov in Strouha river basin;
  - Monitoring of oxygen and temperature of selected sectors of Vltava;
  - Season occurrence of plankton in Hněvkovice, Kořensko and Orlík reservoirs, and in selected model pond reservoirs in the surroundings of the Temelin NPP, while maintaining, eventually extending monitoring of changes in chlorophyll concentration in Orlík water reservoir with emphasise on plankton share assessment with one sampling point under Kořensko;
  - To extend monitoring of changes in water ecosystems by monitoring of changes in zooplankton composition because of its sensitiveness on changes in water temperature and subsequent changes in water ecosystem trophic structure.

- 17. To establish long-term monitoring (even retrospective) of changes in landscape character by means of multispectral satellite data analysis, especially suitable for monitoring of humidity and temperature changes of landscape related to changes in vegetation structure and functions. We recommend annual assessment of satellite data and related creation of ground key for satellite data including definition of key biotopes comprising forests on satellite photos and to ensure regular generalisation in this context in five-year intervals. With respect to the range of individual photos it is possible to ensure objective assessment of changes, which could exceed the borders with Austria and the Federative Republic of Germany.
- 18. To create conditions for financial security of care for residuals of preserved intangible cultural values in the surroundings of the Temelín NPP (including prospects for about 65 cultural monuments) from the side of the Temelín NPP operator as a compensation for affection of the landscape historical structure during construction.
- 19. To decide on further use of spent fuel or to ensure definite storage in permanent underground storage within 65 years in accordance with the concept on spent fuel disposal approved by the Czech Republic Government.
- 20. To eliminate high conservativeness of design accident calculations and to transfer to assessment of best estimate type; to compare inland calculation diagrams with the foreign ones.
- 21. To improve eventual accident occurrence indication system including its assessment; to train emergency preparedness for this purpose and eventually to update emergency plans (conditions for fast information, ability to perform actions and coordination of emergency measures