



**COUNCIL OF
THE EUROPEAN UNION**

Brussels, 5 June 2002

9601/02

LIMITE

**ATO 68
ELARG 197**

"I" ITEM NOTE

from : General Secretariat of the Council
to: COREPER

No. prev. doc. : 5034/02 ATO 1 ELARG 1

Subject : Peer review status report

In July 2001 the Permanent Representatives Committee approved (doc. 10729/01) the procedure for the monitoring of candidate countries' commitments with respect to the recommendations contained in the report on Nuclear Safety in the Context of Enlargement (doc. 9181/01).

In order to implement this mandate the Presidency submitted to the Atomic Questions Group (AQG) a working programme (5034/02) for its *ad hoc* formation, the Working Party on Nuclear Safety (WPNS). Following consideration of this working programme by the AQG on 9 January, the WPNS held a series of meetings from 1 February to 13 May. The peer review status report resulting from this work is here attached.

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The Permanent Representatives Committee is invited to take note of the attached peer review status report and the evaluation and conclusions therein, with a view to take them into consideration in the accession negotiations.

Further to the tasks requested under its existing mandate, including monitoring, the AQG/WPNS stands ready to assist in any further follow-up activity. It will inform the Enlargement Group accordingly.

**PEER REVIEW STATUS REPORT ON
NUCLEAR SAFETY IN THE CONTEXT OF ENLARGEMENT**

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I. Background

In May 2001, the Atomic Questions Group (AQG) and its *ad hoc* formation the Working Party on Nuclear Safety (WPNS) adopted a Report on Nuclear Safety in the Context of Enlargement (doc. 9181/01).

This Report covers civil nuclear power plants (NPP) and other types of nuclear installations (research reactors, fuel cycle, including spent fuel, and radioactive waste management facilities). It contains recommendations that are either general recommendations, i.e. relevant to all candidate countries, or country-specific. According to their priority and urgency these recommendations are:

- Type I Recommendations, defined as recommendations with the highest priority for consideration in the accession negotiations and which should result in firm commitments by Candidate States with regard to improvements and other necessary measures that are to be implemented in a specified and limited time-frame in the context of the enlargement process.
- Type II Recommendations, defined as recommendations of improvements and other necessary measures, which should be implemented by Candidate States, but in a more flexible time frame than Type I Recommendations.

The following elements were taken into account when preparing this report:

- The methodology applied is universal with respect to candidate countries. This means that it is not limited to candidate countries with nuclear power programmes in operation, but it is also applicable to all types of reactor designs and other nuclear installations and to the varied regulatory environments encountered in the candidate countries.
- The demands made to the candidate countries to achieve the expected "high level of nuclear safety" ought not to be stricter than the requirements in force in the EU.
- This exercise does not lead to any transfer of competencies from the Member States to the Community and the competence and responsibilities relating to the safety of the design, construction, operation and decommissioning of a nuclear installation and for the safe management of radioactive waste, lie with the State which has jurisdiction for the installation concerned.

Following the decision of the Permanent Representatives Committee (July 2001, doc.10729/01) the recommendations contained in the Report were transmitted to the candidate countries which were invited to accept them and to indicate specific time-schedules envisaged for implementing each recommendation, with due regard to the priority assigned in the report (type I or type II).

II. Mandate, scope and documentation

II-1 Mandate and scope

The Permanent Representative Committee stated in the abovementioned decision that "the Council will need to ensure the monitoring of the candidate countries' implementation of their commitments undertaken as described above." "Monitoring in this area should follow the practice established in certain other fields, for instance Justice and Home Affairs, or fields where the Commission has called on Member State experts to exercise effective monitoring. Accordingly, the AQG/WPNS is mandated, as of January 2002, to conduct the monitoring under a "Peer Review" mechanism, following the model used during the elaboration of the AQG/WPNS report. The Peer Review will be finalised for each candidate country in time to permit an overall evaluation of this country's situation before the conclusion of the accession negotiations. The AQG/WPNS will inform the Enlargement Group regularly on the progress of the Peer Review.

On specific questions that might arise in the monitoring process, the Peer Review mechanism will provide for the Commission the possibility, established in the course of the work of the AQG and the WPNS, to solicit information from candidate countries on behalf of the Council. Small teams of experts from the AQG and its ad hoc formation the WPNS and the Commission may also visit candidate countries to seek further technical clarification on specific questions. Similarly, candidate countries should have the possibility to seek technical clarification through the Commission on specific questions related to the recommendations in the AQG/WPNS report, following discussion of the AQG/WPNS.

It is evident that the monitoring exercise can only be conducted with the support of professional expertise. Like in the process to establish the situation in the candidate countries, the experts involved in the Peer Review mechanism will be constrained to merely express a technical opinion on their findings."

As the competence and responsibilities relating to the safety of a nuclear installation lie with the State, which has jurisdiction for the installation concerned, the WPNS did not duplicate the detailed assessment of each safety improvement programme, which is the responsibility of the licensing authority of the candidate country.

The present Peer Review status report addresses all the recommendations, countries and types of installations covered in doc. 9181/01.

II-2 Documents used in the peer review

- Report on Nuclear Safety in the context of Enlargement (doc. 9181/01)
- Request letters for additional information transmitted by the Commission to the candidate countries
- Information submitted by the candidate countries (Annex 1)

III. Working method

In line with the mandate, the same basic approach used for the preparation of the AQG/WPNS Report was followed. It was of primary importance that the peer review process ensures that all Member States can participate on an equal footing. Thus, the peer review was organised as a collective effort of experts from all Member States. It is equally essential that all Candidates Countries are monitored in a consistent manner.

The peer review was organised in the following three steps:

Step 1: Preliminary screening of candidate countries responses in order a) to check that all recommendations, general as well as country-specific, included in the report have been addressed by candidate countries and b) to identify and formulate requests for urgent additional information necessary to establish the present report, focusing mainly on Type I recommendations and meeting the following criteria:

- Consistency between requests for different candidate countries regarding the level of detail
- Requests must not change or add new aspects to the recommendations
- Requests must be focused, leading to precise answers

Step 2: Evaluation of the candidate countries responses to each recommendation, as provided in the initial and additional information, was conducted according to the criteria listed below and taking into account 1) that the demands made to the candidate countries ought not to be stricter than what is required of Member States, and 2) the closure commitments made by or expected from Bulgaria/Slovakia/Lithuania:

- Is the recommendation adequately addressed, i.e. are the scope and nature of the recommendation clearly understood by the candidate countries?
- Do the measures already implemented seem to be adequate ?
- Do plans and schedules reported for announced measures seem to be adequate and likely to lead to timely implementation of the recommendations, taking into account availability and adequacy of resources earmarked by the candidate countries ?
- Which items should be recommended for further monitoring, taking into account that demands on monitoring in this area ought not to be stricter than in areas covered by the acquis. Furthermore, in identifying needs for further monitoring, the WPNS has taken into account the nature of the recommendations addressed to the respective regulatory body of the candidate country in Document 9181/01.

Step 3: Finalisation of the Peer review status report. This step results in an harmonised evaluation across candidate countries and recommendations, and definition of WPNS general and candidate countries-specific conclusions from the peer review on the current status of implementation of the commitments made by the candidate countries and on those commitments for which the WPNS recommends further monitoring¹. To be effective, without implying any transfer of competences from the Member States to the Community, this monitoring should make use of appropriate expertise from Member States and the Commission in the fields of nuclear safety and its regulation.

IV. The WPNS evaluation

IV-1 General conclusion

In general terms, following its technical evaluation of the information made available to date (1/05/02) the WPNS is of the view that Candidates Countries are clearly committed to fulfil the recommendations set out in doc.9181/01, both for NPP and other types of installations. They have provided information on measures already implemented as well as on time-schedules and resources committed (budget, staff) for measures not yet fully implemented, some of which will not be completed before a few years' time. WPNS recommends to invite candidates countries to report on progress on the completion of these measures.

The country fiches collected in section IV.2 provide, on the basis of the information submitted and from the technical point of view of the WPNS, an overall evaluation of whether and how each candidate country has accepted and addressed the recommendations contained in doc. 9181/01. If a given, specific or general, recommendation is not fully addressed, the corresponding fiche identifies the part(s) of the recommendation that needs further attention by the candidate country. Where appropriate, the fiches also highlight those recommendations for which the WPNS advises on further monitoring in due course before accession. Unless specified in the country fiche WPNS makes no recommendation for further monitoring.

¹ The fact that certain items have been identified for further monitoring in the context of this report is without prejudice to monitoring these and other items in the context of bilateral and multilateral fora, for example the review meetings under the Convention on Nuclear Safety.

IV.2 Country fiches

Bulgaria

1. WPNS notes that Bulgaria has accepted and addressed all the AQG/WPNS recommendations contained in doc. 9181/01.
2. In evaluating the commitments by Bulgaria, the WPNS reaffirms the importance of Bulgaria's commitment on the definitive closure of Units 1 to 4 of Kozloduy NPP at the earliest possible dates, in agreement with the Understanding signed with the Commission in 1999. This includes in particular the commitment to definitively close down Units 1 and 2 before the year 2003, and on the occasion of the updating of the energy strategy which will be completed in 2002, to decide the dates of the definitive closure of Units 3 and 4, which will be before the presently envisaged dates of 2008 and 2010 respectively. The EU's understanding is that the closure of Units 3 and 4 will take place in 2006 at the latest.
3. The WPNS regards the responses by Bulgaria, including those on on-going actions, contained in documents CONF-BG 68/1, CONF-BG 11/02 and in the Additional information dated 26.04.02, as commitments:
4. Most AQG/WPNS recommendations have been adequately addressed with the exception of the following to which Bulgaria should devote further attention:
 - **2nd General Recommendation NPP type I** regarding Safety Analysis Reports (SARs): There is a need to clarify the legal status of SARs regarding their use in the licensing on NPPs.
 - **1st Specific Recommendation NPP type I** regarding the new nuclear legislation: There is a need to enact the new Nuclear Law as soon as possible
 - **1st General Recommendation Other Nuclear Installations type II** regarding the storage of radioactive waste: Special attention should be given to the funding of the Radioactive Waste Storage programme.
5. WPNS recommends further monitoring of the following commitments:
 - **1st General Recommendation NPP type I** regarding the plant specific safety improvement programmes: It should be ensured that the programmes are completed in accordance with presented plans.
 - **2nd General Recommendation NPP type I**
 - Regarding Safety Analysis Reports (SARs): It should be ensured that the SARs are completed in accordance with presented plans.
 - Regarding Emergency Operating Procedures (EOPs). The completion of work on EOPs should be ensured in accordance with presented plans and so that these provide for the development of appropriate guidance on the management of beyond design basis accidents.
 - **2nd Specific Recommendation NPP type I** regarding the resources of the regulator: The provision of adequate human and financial resources should be ensured according to the presented action plan.
 - **5th Specific Recommendation NPP type I** regarding the implementation of specific upgrading improvements at Kozloduy units 3-4: Specific note should be taken of these items during the monitoring associated with 1st General recommendation NPP type I, Upgrading programme.
 - **6th Specific Recommendation NPP type I** regarding high-energy pipe breaks at Kozloduy units 5-6: The implementation of the remedial programme according to the presented plans needs to be checked.

Cyprus

1. WPNS notes that Cyprus has accepted and adequately addressed all the AQQ/WPNS recommendations contained in doc. 9181/01.
2. The WPNS regards the responses by Cyprus, including those on on-going actions, contained in doc. CONF-CY 47/01 and CONF-CY 3/02 as commitments.

Czech Republic

1. WPNS notes that the Czech Republic has accepted and addressed all the AQQ/WPNS recommendations contained in doc. 9181/01
2. The WPNS regards the responses by the Czech Republic, including those on on-going actions, contained in documents CONF-CZ 50/01 + ADD1 + ADD 2, CONF-CZ 91/01 and CONF-CZ 11/02, as commitments.
3. Most AQQ/WPNS recommendations have been adequately addressed with the exception of the following to which the Czech Republic should devote further attention:
 - **1st Specific Recommendation NPP type I** regarding high energy pipe breaks in Temelin 1-2.
 - **1st General Recommendation NPP type II** regarding qualification of valves in Temelin 1-2.

The Czech Republic has agreed to report to the EU on the final measures regarding these two cases. WPNS welcomes this and is prepared to review these reports.

4. In addition, in the following case adequate measures have been indicated but the WPNS wishes to emphasize its expectation for the Czech Republic to ensure:
 - **1st Specific Recommendation NPP type II regarding the bubbler condenser system for Dukovany 1-4:** the completion of the programme related to the full verification of the performance of the containment bubbler-condenser systems for all design basis accidents

Estonia

1. WPNS notes that Estonia has accepted and adequately addressed all the AQQ/WPNS recommendations contained in doc. 9181/01.
2. The WPNS regards the responses by Estonia, including those on on-going actions, contained in doc. CONF-EE 6/02 as commitments.

Hungary

1. WPNS notes that Hungary has accepted and addressed all the AQQ/WPNS recommendations contained in doc. 9181/01.
2. The WPNS regards the responses by Hungary, including those on on-going actions, contained in doc. CONF-H 2/02 and CONF-H9/02 as commitments.

3. Most AQG/WPNS recommendations have been adequately addressed by Hungary. In the following case adequate measures have been indicated but the WPNS wishes to emphasise its expectation for Hungary to ensure:

- **1st Specific Recommendation NPP type II regarding the bubbler condenser system for Paks 1-4:** The completion of the programme related to the full verification of the performance of the containment bubbler-condenser systems for all design basis accidents

Latvia

1. WPNS notes that Latvia has accepted and adequately addressed all the AQG/WPNS recommendations contained in doc. 9181/01.
2. The WPNS regards the responses by Latvia, including those on on-going actions, contained in doc. CONF-LV 67/01 as commitments.

Lithuania

1. WPNS notes that Lithuania has accepted and addressed all the AQG/WPNS recommendations contained in doc. 9181/01.
2. In evaluating the commitments by Lithuania, the WPNS reaffirms the importance of the commitments made by Lithuania according to which Unit 1 of Ignalina NPP will be closed down before 2005, and the issue pertaining to the conditions and the precise final date of closure and the decommissioning of Unit 2 shall be solved in the updated National Energy Strategy prepared in the year 2004. Clear and binding confirmation of Lithuania's commitment regarding the final closure of Unit 1 before 2005, and clear and binding commitment by Lithuania to close Unit 2 by 2009 at the latest are needed. The WPNS also took note that it is expected that Lithuania will undertake such a commitment during 2002, in the course of the accession negotiations, thus ahead of the above-mentioned date of 2004.

WPNS reiterates its opinion that, despite the large safety improvements already achieved, it is not technically realistic to bring Ignalina NPP to the "high level of nuclear safety" expected within the EU. Therefore WPNS again wishes to emphasise that special attention needs to be given to measures aimed at improving the prevention of accidents during the remaining operating time, such as the timely installation of the new diverse shut down system (DSS) of Ignalina 2, and measures to ensure a high level of operational safety until the final closure of both units. WPNS has serious concerns regarding the delay beyond 2003 (May 2004) of the installation and commissioning of the DSS at Ignalina 2, and indications that it might be even further delayed. WPNS regards the DSS as very important for the justification to operate Ignalina 2 until 2009.

WPNS regards the responses by Lithuania, contained in documents CONF-LT 66/01 and CONF-LT 15/02, as commitments

3. Most AQG/WPNS recommendations have been adequately addressed with the exception of the following to which Lithuania should devote further attention:
 - **1st Specific Recommendation NPP type I** regarding resources of the regulator: The action plan to increase the resources of VATESI needs to be reaffirmed in order to cover all regulatory needs including the needs to obtain the necessary independent technical support.

- **4th Specific Recommendation NPP type I:** A consistent action plan needs to be developed, with clear priorities and dedicated resources, for the operational safety of Ignalina 1 and 2 during the remaining operating time, including measures to ensure the necessary staff and their motivation.
 - **5th Specific Recommendation NPP type I** regarding the reactor protection system: Clarify the Lithuanian position to operate Ignalina 2 beyond 2003 without the DSS. Moreover an action plan needs to be developed in the case the installation and commissioning of the DSS of Ignalina 2 is further delayed beyond May 2004.
4. WPNS recommends further monitoring of the following commitments
- **1st General Recommendation NPP type I** regarding the plant specific safety improvement programmes: It should be ensured that the programmes are implemented in accordance with presented plans.
 - **2nd General Recommendation NPP type I** regarding EOPs: Amending of the existing Emergency Operating Procedures with guidelines for management of beyond design basis accidents should be ensured in accordance with the presented plan.
 - **1st Specific Recommendation NPP type I and 1st Specific Recommendation Other Nuclear Installations type II** regarding resources of the regulator: Strengthening of the resources of the regulatory body (VATESI) should be ensured and an evaluation made whether resources prove to be sufficient.
 - **3rd Specific Recommendation NPP type I** regarding financial situation of the Operator: Further development of the financial capability of Ignalina NPP should be ensured in order to finance the necessary safety improvements.
 - **4th Specific Recommendation NPP type I** regarding the operational safety of Ignalina 1: Implementation of the action plan for operational safety of Ignalina 1 and 2 should be ensured, including the timely adoption of the Law on Social Welfare.
 - **5th Specific Recommendation NPP type I** regarding the reactor protection system of Ignalina 2: The installation and commissioning of the DSS at unit 2 should be ensured without further delay.
 - **7th Specific Recommendation NPP type I** regarding safety documentation: The development of the Safety Analysis Report for Ignalina and its regulatory review should be ensured in accordance with presented plans.

Malta

1. WPNS notes that Malta has accepted and adequately addressed all the AQG/WPNS recommendations contained in doc. 9181/01.
2. The WPNS regards the responses by Malta, including those on on-going actions, contained in doc. CONF-M 2/02 as commitments.

Poland

1. WPNS notes that Poland has accepted and adequately addressed all the AQG/WPNS recommendations contained in doc. 9181/01.
2. The WPNS regards the responses by Poland, including those on on-going actions, contained in doc. CONF-PL 2/02 and CONF-PL 19/02 as commitments.

Romania

1. WPNS notes that Romania has accepted and addressed all the AQG/WPNS recommendations contained in doc. 9181/01.
2. In addition, the WPNS regards the responses by Romania, including those on on-going actions, contained in documents CONF-RO 39/01, CONF-RO 2/02, CONF-RO 4/02 and CONF-RO 21/02, as commitments:
3. Most AQG/WPNS recommendations have been adequately addressed with the exception of the following to which Romania should devote further attention:
 - **1st General Recommendation NPP type I, and 1st Specific Recommendation NPP type II** regarding safety improvements implemented in Canada: The relevant safety improvements adopted for similar plants in Canada need to be considered in a systematic way and implemented in Cernavoda Unit 1 and Unit 2 (under construction).
 - **1st Specific Recommendation NPP type I** regarding capability and resources of the regulator: The co-operation between CNCAN (National Commission for the Control of Nuclear Activities) and the CNSC (Canada Nuclear Safety Commission) needs to be strengthened in order to keep pace with generic safety issues under consideration in Canada and to obtain advice on regulatory issues.
 - **3rd Specific Recommendation NPP type I:** The implementation of the Emergency Operating Center at the Cernavoda site needs to be ensured according to the established plan but independently of the time schedule for commissioning of Unit 2.
 - **2nd Specific Recommendation NPP type II** regarding preservation of operator's competence: The continued financial resources of the Operator, as well as its preserving of competent management and staff, need to be ensured
 - **3rd Specific Recommendation NPP type II** regarding fire and seismic hazards assessment at Cernavoda: Updating and regulatory review of the seismic and fire deterministic assessment of Cernavoda NPP Unit 1 need to be completed.
4. WPNS recommends further monitoring of the following commitments:
 - **1st General Recommendation NPP type I and 1st Specific Recommendation NPP type II** regarding safety improvements implemented in Canada: The implementation of the relevant safety improvements, adopted in similar Candu plants in Canada, should be ensured.
 - **2nd General Recommendation NPP type I** regarding safety analysis reports: The implementation of the Strategic Plan for Safety Analysis of Cernavoda Unit 1, including seismic and fire assessment, and in the development of the SAR for Cernavoda Unit 2, should be ensured according to the presented plans.
 - **1st Specific Recommendation NPP type I** regarding capability and resources of the regulator: The sufficiency of allocated resources, and the progress made to strengthen the capability of the regulatory body, should be ensured according to the presented plans.

Slovakia

1. WPNS notes that Slovakia has accepted and addressed all the AQG/WPNS recommendations contained in doc. 9181/01.

2. In evaluating the commitments by Slovakia, the WPNS reaffirms the importance of the commitments, confirmed by Slovakia, to close down Units 1 and 2 at Bohunice V1 by 2006 and 2008 respectively.
3. In addition, the WPNS regards the responses by Slovakia, including those on on-going actions, contained in documents CONF-SK 56/01, CONF-SK 86/01, CONF-SK 14/02, and in the Add info dated 24.04.02, as commitments:
4. Most AQG/WPNS recommendations have been adequately addressed by Slovakia. In the following cases adequate measures have been indicated but the WPNS wishes to emphasise its expectation for Slovakia to ensure:
 - **1st General Recommendation NPP type I** regarding the completion of plant-specific improvement programmes: The timely completion of Bohunice V-2 safety improvement programme.
 - **2nd General Recommendation NPP type I** regarding EOPs and **2nd Specific Recommendation NPP type II** regarding confinement performance of Bohunice 1-2: The implementation of appropriate guidance for the management of beyond design basis accidents, in particular for Bohunice V1.
 - **1st Specific Recommendation NPP type I** regarding the operational safety of Bohunice 1-2 until final closure: The implementation of the proper measures to preserve staff motivation at Bohunice Units 1 and 2.
 - **3rd Specific Recommendation NPP type II regarding the bubbler condenser systems of Bohunice 3-4 and Mochovce 1-2:** The completion of the programme related to the full verification of the performance of the containment Bubbler-condenser systems for all design basis accidents

Slovenia

1. WPNS notes that Slovenia has accepted and addressed all the AQG/WPNS recommendations contained in doc. 9181/01.
2. The WPNS regards the responses by Slovenia, including those on on-going actions, contained in doc. CONF-SI 84/01, CONF-SI 85/01 and CONF-SI 7/02 as commitments.
3. Most AQG/WPNS recommendations have been adequately addressed with the exception of the following to which Slovenia should devote further attention:
 - **1st Specific Recommendation NPP type I** regarding legislation: Ensure the de jure independence of the regulatory body (SNSA) from promotion of nuclear energy.
4. In addition, in the following case adequate measures have been indicated but the WPNS wishes to emphasize its expectation for Slovenia to ensure:
 - **2nd Specific Recommendation type II regarding the seismic qualification of Krsko NPP:** The completion of the activities related to the seismic characterization of Krsko site.

V. Annex

V-1 List of documents submitted by the candidate countries

Country	Document	Date
Bulgaria	CONF-BG 68/01	13.11.01
	CONF-BG 11/02	20.03.02
	Add. information	26.04.02
Cyprus	CONF-CY 47/01	09.11.01
	CONF-CY 3/02	10.01.02
Czech Republic	CONF-CZ 50/01 + ADD 1 + ADD 2	17.09.01
	CONF-CZ 91/01 (7 th add. info, suppl.)	30.11.01
	CONF-CZ 11/02	04.04.02
Estonia	CONF-EE 06/02	25.01.
Hungary	CONF-HU 1/02	10.01.02
	CONF-HU 9/02	22.03.02
Latvia	CONF-LV 67/01	14.11.01
Lithuania	CONF-LT 66/01	31.10.01
	CONF-LT 69/01	16.11.01
	CONF-LT 15/02	22.03.02
Malta	CONF-MT 2/02	21.01.02
Poland	CONF-PL 2/02	14.01.02
	CONF-PL 19/02	22.03.02
Romania	CONF-RO 39/01	09.11.01
	CONF-RO 2/02	10.01.02
	CONF-RO 4/02	30.01.02
	CONF-RO 21/02	22.03.02
Slovakia	CONF-SK 56/01	20.07.01
	CONF-SK 86/01 (add. info 5, suppl.)	19.09.01
	CONF-SK 14/02	22.03.02
	Add. information	24.04.02
Slovenia	CONF-SI 84/01	14.12.01
	CONF-SI 85/01	14.12.01
	CONF-SI 7/02	22.03.02

V-2 List of Acronyms

DSS	Diverse Shut down System
EOP	Emergency Operating Procedure
NPP	Nuclear Power Plant
SAR	Safety Analysis Report
VATESI	Nuclear Power Safety Inspectorate (Lithuania)