

# **BULATOM International Nuclear Forum**

## **“Nuclear Energy – Challenges and Prospects”**

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### **Center for Nuclear Safety in Central and Eastern Europe (CENS): A Platform for Co-operation**

[www.censee.org](http://www.censee.org)

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#### **ABSTRACT**

*The paper presents a summary of the current status and the activities of the Centre of Nuclear Safety in Central and Eastern Europe (CENS).*

*The CENS is a non-profit and independent association supported by the Swiss and Slovak Governments. The main mission of the CENS is to provide an independent platform for technical co-operation between the regulatory authorities of the Western and Eastern countries. The key partners of the CENS are the Swiss Federal Nuclear Safety Inspectorate (HSK), the International Atomic Energy Agency (IAEA), the US Department of Energy (US DOE), the Nuclear Regulatory Authority of the Slovak Republic (UJD), the Gesellschaft für Anlagen-und Reaktorsicherheit mbH (GRS), Germany and the Institute of Radiation Protection and Nuclear Safety (IRSN), France.*

*The CENS programs for 2003-2004 are presented. It can be considered as a complement to the IAEA activities in the area of short-term and event urgent planning. CENS projects as an example are presented.*

*CENS proposals for co-operation with the Bulgarian institutions are made in connection with the topics of the forum round table discussions.*

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## 1. Introduction

The nuclear safety is one of the major concerns of governments worldwide. The process of transformation in the Central and Eastern European Countries (CEEC) has created a dedicated situation for the nuclear regulatory authorities. They fell down in situation without the necessary human and financial resources, adequate infrastructure, and state-of-the-art knowledge to solve the upcoming challenges.

Based on this, the regulatory authorities from CEEC welcomed the idea of creation of the Centre for Nuclear Safety (CENS) as a non-profit organization that would help them to achieved independence and higher efficiency. After two years of preparation, the CENS was founded in March 2002 in Bratislava. The funding for the project was provided by the Swiss Government through the Swiss Agency for Development and Cooperation (SDC).

The CENS is a new approach for the technical co-operation between the regulatory authorities of the Western and Eastern countries. The CENS main aims are to improve the independence, competence, and efficiency of the nuclear regulatory authorities, and to improve the safety in the nuclear facilities, by providing a system of networking and international membership for regulators in CEEC and for technical organizations from around Europe.

## 2. What is the CENS

The Center for Nuclear Safety (CENS) in Central and Eastern European Countries (CEEC) and Newly Independent States (NIS) is a non-profit association based in Bratislava, Slovakia. Established in March 2002, the Center builds on experience from Swiss bilateral technical-cooperation projects in the region over the last decade, with the aim of integrating these efforts under a common umbrella, and promoting a transition to higher standards of nuclear safety within CEEC and NIS countries.

The idea for the Center was first presented at the final plenary session of the International Atomic Energy Agency (IAEA) conference on "Strengthening Nuclear Safety in Eastern Europe", held at the IAEA in Vienna between 14 -18 June 1999. It was positively received by senior representatives from CEE countries, the United States, and European Union. They saw it as an effort both to sustain, and to provide an international key point for support of regulatory authorities in the area of staff training, safety evaluation, and information management.

The Swiss Agency for Development and Cooperation (SDC) of the Swiss Government together with the Swiss Federal Nuclear Safety Inspectorate (HSK) provided the support required to prepare and finally established the CENS. The team effort was characterized by the dedicated personal engagement of Mr. Axel Heiri, SDC Program Manager; Mr. Lothar Hahn, Scientific Director of Germany's Gesellschaft für Anlagen- und Reaktorsicherheit mbH (GRS); Mr. Mohsen Khatib-Rahbar, President of Energy Research Inc. in Washington; and Mr. Miroslav Lipar, former chairman of Slovakia's Nuclear Regulatory Authority (UJD). The successful implementation was accomplished mainly through the tireless efforts of Ms. Marianne Zünd, of the HSK, and Mr. Peter Stricker, of KEK-CDC Consultants in Zurich. All this activity was strongly supported by HSK Director Mr. Ulrich Schmockler.

The CENS is dedicated to following the „**5 Principles of Good Performance**“:

- **Independence** – CENS activities should be based on an objective and an unbiased assessment of all relevant information. They should be free of outside influences, and be traceable and well documented.
- **Communication** – Open channels of communication should be maintained with stakeholders, partners, the international nuclear community, media, and public.
- **Efficiency** – Commitment to having the best and most effective possible management and administration, which is maximally efficient in both time use and cost.
- **Transparency** – All activities, operational and financial, should be conducted in the most transparent and open manner.
- **Reliability** – Activities should be based on the most up-to-date technical knowledge from reliable sources, and should make use of best practice, available operational experience, and research results.

The CENS working method is "**Team Work, Synergy and Integration**". This is intended to maximize synergism and integration of team effort using the best available people.

Significant support and encouragement has been provided by the nuclear safety community, including:

- National safety authorities in the Eastern and Western countries;
- International organizations (IAEA, OECD/NEA, EBRD, EC, etc.);
- Nuclear industry.

Meanwhile, our membership has grown, including:

- Prominent members of the international nuclear safety community;
- Large, medium, and small-sized enterprises and corporations;
- Governmental and non-governmental organizations.

Considering the short period the CENS has managed to implement a remarkable number of activities and in many ways has achieved more than the objectives foreseen in the initial planning period. The CENS enjoys the support of the key actors and has become a very promising project for all stakeholders in the field of nuclear safety in Central and Eastern Europe.

### 3. Executive Summary

The organization's starting phase significantly influences the CENS further orientation and development. Naturally, the CENS first steps focused on developing internal infrastructure, ensuring basic operation of the secretariat, computer network building, and communication development. The launch of outreach activities aimed at engaging cooperation from all potential CENS stakeholders was also very important.

Preparation for establishing the CENS began in November 2000, and came to fruition in March 2002 when it was registered at the Slovak Interior Ministry. Making the new association a reality was the result of joint initiatives from organizations including the HSK, UJD SR, and SDC.

The next important milestone was the first CENS General Assembly, held on April 27, 2002, which included the election of Mr. Sabyasachi Chakraborty as CENS president.

#### 3.1. Co-operation

International cooperation is a basic attribute of the CENS. In this context, the following key events were held during 2002:

- IAEA Deputy Director General Mr. T. Taniguchi visited the CENS office on 27 July, 2002;
- CENS board members met European Commissioner Mr. Günter Verheugen and his office members in Brussels on September 2, 2002;
- CENS Executive Director Mr. Lubos Tomik met Slovak President Mr. Rudolf Schuster on November 19, 2002;
- The CENS was visited by Swiss President Mr. Kaspar Villiger on December 17, 2002, as part of his visit to Slovakia.

Also, a Memorandum of Understanding was signed with the US Department of Energy (US DOE), and a co-operation agreement was signed with the Scientific and Engineering Center for Nuclear and Radiation Safety of Gosatomnadzor (Russian Nuclear Safety Regulatory Authority). Such international collaborations, constantly being expanded, enable the CENS to benefit from extensive expertise and capabilities.

Two major technical support organizations became members of the CENS: France's Institut de Radioprotection et de Sûreté Nucléaire (IRSN) and GRS (Germany). Their membership laid a good basis for mutual cooperation and efficient exchange of experts and knowledge for prepared projects.

#### 3.2. First Annual Conference

The first CENS annual conference was held in Bratislava on September 25, 2002, and provided the association a major opportunity to set out its mission **to media and scientific society**. At the respective press conference the association received a lot of media attention, while the inaugural ceremony was attended by **high-ranking representatives from embassies, the EU, IAEA, and OECD/NEA**, who all expressed their support for it.

The scientific part of the conference focused on „**The Regulatory Aspect of Decommissioning**“. Decommissioning processes currently attract much interest with several nuclear plants in CEE countries due to be shut down. A meeting on decommissioning was organized by the IAEA in December, and representatives of the CENS presented the idea of „**Regional Decommissioning Activity**“.

### 3.3. Management

The team building and the project management is an important part of the CENS organization. The young, dynamic team of the Center's secretariat is complemented by experienced experts from abroad. Our goal is to build an elastic organization, with a flexible secretariat that closely co-operates and supports the managers responsible for various projects.

The CENS project managers lead teams of international experts in their respective fields, and thus fulfill regional project goals and satisfy needs of all stakeholders.

An attractive feature of the Center is that its staff is drawn from different nationalities (Slovakia, Russia, Bulgaria, Romania), creating a multicultural environment that adds a new dimension of understanding, communication, and networking.

To ensure efficiency, transparency, and reliable process, the CENS has begun preparations for obtaining the ISO certification 9001:2001, which will culminate in summer 2003.

### 3.4. Activities

In May 2002, with its secretariat then not fully operational, the first real test for the CENS was to organize an international workshop, on the basis of a mandate from the **US Pacific National Northwest Laboratory (PNNL)**, on „**Safety of First Generation VVER 440 Nuclear Power Plants**„. The feedback from all participants and sponsors was very positive, and the event can be called the Center's first success. In 2002, another **two international workshops** were organized with the same set-up as the first. Their main goal was **to identify and prioritize potential improvements in hardware, operations, and decision-making at VVER-440 NPPs by exploiting insights gained from recent Probabilistic Safety Assessments (PSAs)**. These potential improvements were evaluated on the basis of their feasibility and cost-effectiveness, and all of them earned good reviews from institutions and participants from different countries. More than one hundred participants attended these workshops, held in the pleasant Slovak spa town of Piestany.

A draft course of lectures entitled „**Other External Events PSA**“ was developed in the framework of cooperation between the **CENS and SWISRUS Project**, with the aim of improving the Center's technical competence through transfer of experience and knowledge. This lecture course is planned to be a starting point for developing a PSA basic lecture course at the Center.

A draft of the „**Review Guideline for Level-1 PSA for Internal Initiating Events at Power Level**“ was also developed. This guideline should become a starting point for developing PSA review guidelines used by the Center. The guideline was tested during the review process of the Armenia PSA Review Project, performed by the CENS with support from the US DOE and IAEA.

Preparations were also begun for projects such as the Armenia PSA Review, Database Collections, and the Center's unique software applications for regulatory authorities.

### 3.5. Future

The CENS will face new challenges in its second year, and efforts will be focused on three main programmes: **REGULATORY INDEPENDENCE AND EFFECTIVENESS, TRAINING, and INFORMATION MANAGEMENT**.

Our contribution to nuclear safety in our region will also have positive trends in the near future, given the significant role that the EU enlargement process will play in **harmonizing general principles of safety at nuclear installations**.

By having unique access to international technical expertise in the field of nuclear safety and inspection, the CENS is able to facilitate the creation of an independent peer review system for the

national safety authorities, and provide a platform for the exchange and utilization of the best technical expertise available in the region.

The CENS is in the process of organization of three main training courses:

- **Effective Inspection Practices** , *November 3-7,2003, Slovakia*. The aim is to improve the effectiveness of inspectors or technical reviewer;
- **Severe-Accident Analysis and Use of the Melcor Computer code**, *October 13-18,2003 Slovakia*. The aim is the development of basic skills and familiarization with key aspect of the code;
- **Introduction to Nuclear Safety for Prospective Nuclear Safety Professionals** *Spring 2004, Bratislava*. The aim is to introduce the principles, basic concepts, and core functions of nuclear safety management and regulatory oversight.

## 4. Association

### 4.1. CENS Mission

To support the protection of the environment by enhancing the safety of nuclear facilities in CEEC and CIS countries through:

- The enhancement of nuclear regulatory bodies' independence, competence and efficiency;
- The improvement of safety in nuclear facilities;

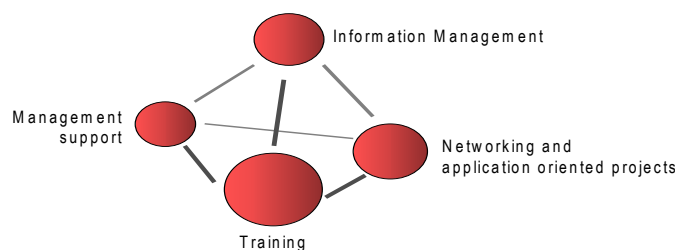
Through its outreach activities, the CENS aims to:

- Build a network and intensive relationships among regulatory bodies in CEEC and CIS countries;
- Act as a platform for scientific and technical know-how exchange;
- Co-operate with the IAEA through its regional programs, and to cooperate with bilateral initiatives of other countries;
- Create rotational programs for international experts among IAEA Member States;
- Commit itself to providing and managing comprehensive information by means of its website, newsletters, and events;

### 4.2. Main Pillars of the CENS

**Training activities:** technical and management courses, workshops, including technical language training, project management, media and communication training and scholarships.

**Information management:** a platform for safety-relevant incident reports, data and report collection and a reference database for different reactor types for accident analysis and probabilistic safety assessment.



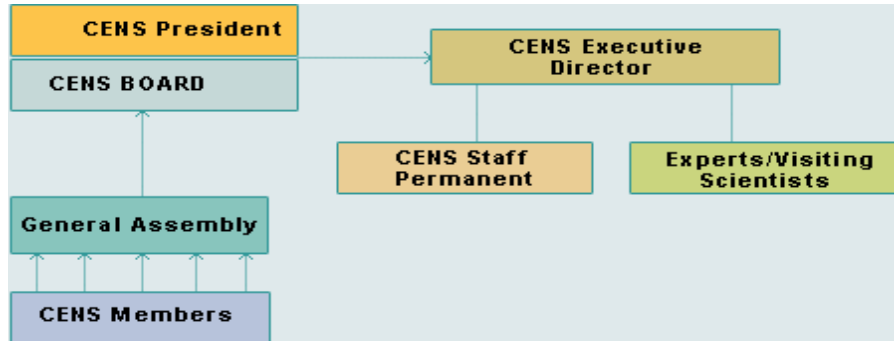
**Expertise, networking and other services offered by CENS:** conferences on topical issues of the CENS stakeholder countries, coordination of safety studies ordered by regulatory bodies, peer review of studies, provision of methodological support to regulatory bodies, a hotline consulting service, and knowledge management.

**Management support functions:** web publishing, database maintenance and development, documentation/electronic library services, CENS newsletter and publications, and translation services.

### 4.3. CENS Organizational Structure

According to its statutes, the CENS is run by a Board, President, and Executive Director. The CENS has a small and flexible staff of six, including the permanent secretariat and project-oriented international experts.

### **CENS Organizational Chart**



#### **4.4. CENS President**

Mr. Sabyasachi Chakraborty, Head of Safety Research and International Affairs, Swiss Federal Nuclear Safety Inspectorate (HSK).

#### **4.5. CENS Board Members**

- **Mr. Lothar Hahn**, Scientific Director, Gesellschaft für Anlagen-und Reaktorsicherheit mbH (GRS);
- **Ms. Marta Ziakova**, Chairman, Nuclear Regulatory Authority of the Slovak Republic, UJD SR;
- **Mr. Axel Heiri**, Program Manager, Swiss Agency for Development and Cooperation (SDC);
- **Ms. Marianne Zünd**, Deputy Head of Safety Research and International Affairs, HSK;
- **Mr. Jozef Zlatnansky**, Program Manager Officer, Europe Section, IAEA.

#### **4.6. CENS Members**

The CENS has the overall goal of establishing strong relationships between regulatory bodies of all Central and Eastern European Countries (CEEC) and to act as networking unit between them. The CENS members until May 2003 are as follows:

##### **4.6.1. Legal Authorities**

###### **Regulatory Authorities**

- Nuclear Regulatory Authority of the Slovak Republic (UJD SR);
- Swiss Federal Nuclear Safety Inspectorate (HSK);
- Armenian Nuclear Regulatory Authority (ANRA);
- National Commission for Nuclear Activities Control, Romania (CNCAN);
- Bulgarian Nuclear Regulatory Agency (NRA);
- Hungarian Atomic Energy Authority (HAEA).

###### **Technical Support Organizations**

- Institut de Radioprotection et de de Sûreté Nucléaire (IRSN), France;
- Gesellschaft für Anlagen- und Reaktorsicherheit mbH (GRS), Germany.
- Energy Research. Inc, USA

###### **Other Institutions**

- Swiss Agency for Development and Cooperation (SDC) of the Swiss Government;
- PPA Controll, a.s., Slovakia.

##### **4.6.2. Individuals**

- Mr. S. Chakraborty, Switzerland;
- Mr. J. Zlatnansky, Slovakia;
- Mr. B.R. Sehgal, Sweden;
- Mr. V. M. Rao Koorapaty, Austria;
- Mr. H.R. Lutz, Switzerland.

#### **4.7. General Assembly**

The first general assembly of the CENS was held on April 27 in Bratislava. The general assembly appointed the first CENS board, elected Mr. Sabyasachi Chakraborty CENS President, and set the membership fees.

The second general assembly of the CENS is planned to be held on September 02 in Budapest, Hungary.

#### **4.8. CENS Board Meetings**

The CENS board meetings were held on:

- **April 27, 2002, Bratislava** – The first CENS board meeting confirmed the adoption of members presented at the general assembly;
- **August 3, 2002, Bratislava** – The board appointed Mr. Lubos Tomik as CENS Executive Director; the HSK became a member of the association;
- **September 24, 2002, Bratislava** – The board approved the membership of the Institut de Radioprotection et de de Sûreté Nucléaire (IRSN);
- **November 27, 2002, IAEA Vienna** – The meeting was attended by IAEA Deputy Director General Mr. T. Taniguchi and Head of Europe Section Mr. M. Samiei. GRS, the Armenian Regulatory Authority ANRA, and the Romanian regulatory authority CNCAN became CENS members. In addition the board approved the CENS Financial Manual and the CENS Rules of Management.
- **March 24, 2003, IAEA Vienna** – The meeting, which was attended also by representatives of the IAEA; regulatory bodies of Switzerland, Hungary, Bulgaria, Armenia, Romania, the Czech Republic, and Lithuania; and institutions including GRS (Germany), IRSN (France), and PPA Controll (Slovakia). Alongside the board meeting, a one day workshop on "Regulatory Management Systems" was held on March 25 with cooperation from the IAEA.

### **5. Activities**

#### **5.1. International Activities**

For the CENS, an association based on global networking, it is essential to build up intensive international relations. The main objective is to promote its mission in Central and Eastern Europe in order to identify and bring together the potential of experience and possible cooperation in different countries. High-level contacts were established with the EU, IAEA, technical support organizations and regulatory bodies. An international approach plays a crucial role in the Center's activities.

##### **5.1.1. High-Level Visits**

CENS President Sabyasachi Chakraborty, Executive Director Lubos Tomik, board members Lothar Hahn and Marta Ziakova, and Michael Hertrich (BMU, Germany) met with European Commissioner Günter Verheugen and his office members in Brussels on September 2, 2002. The commissioner expressed his support for the Center's activities. In the area of nuclear energy, the European Union has repeatedly stressed the importance of candidate countries having high levels of nuclear safety.

During an official visit to Slovakia on December 16-17, 2002, the Swiss President Mr. Kaspar Villiger met with Mr. Chakraborty and Mr. Tomik. He described the CENS as one of the latest examples of bilateral cooperation between Switzerland and Slovakia. As nuclear safety is a major concern in Europe, cooperation between Switzerland and Slovakia within the CENS framework should continue in a good spirit, according to the President.

The Center also received recognition from Slovakia's head of state. On November 19, 2002, Mr. Tomik met President Rudolf Schuster in Bratislava, and briefed him about the Center's activities and accomplishments since its formation. The President praised the Swiss government's support for establishing the CENS, which he called an important international project for improving nuclear safety in the region. Mr. Tomik stressed the



need for the association to have political support as a Non-Government Organization (NGO). President Schuster promised to support and promote the Center, especially in the Visegrad Four, which includes also the Czech Republic, Hungary, and Poland.

### 5.1.2. Cooperation with the IAEA

The CENS is working in close cooperation with the IAEA. Deputy Director General Mr. Tomihiro Taniguchi visited the Center's office during his visit to Slovakia on July 26, 2002, and expressed strong support for its concept of networking. Together with Mr. Massoud Samiei, Head of Europe Section of Technical Co-operation Department at IAEA, he attended the CENS Board Meeting held at the IAEA in Vienna on November 27, 2002. In 2002 and until April 2003, the Center organized four workshops in cooperation with IAEA and US DOE, and began negotiations on the possibility of outsourcing some IAEA activities to the CENS in 2003.

The Center played an active role during the December 12-13 IAEA Regional Workshop on „**NPP Decommissioning Technology and Building Infrastructure in CEEC**“. The participants expressed support for the Center for the fact it brought together experience of decommissioning in CEEC and set up a Regional Decommissioning Activity.

#### **Participation in IAEA Workshops and Consultation Meetings**

CENS experts attended several workshops and consultation meetings organized by the IAEA in 2002:

- Workshop on „Harmonization of PSA Methodology Approaches for VVER-1000 Reactors and Comparison of PSA Results“; Berlin, Germany, 9-13 July 2002;
- Expert mission on „Review of Buser NPP Level-1 Internal Event PSA, IRA/4/029“; Moscow, Russia, 15-19 April 2002;
- Workshop on „Specific Features of VVER-1000 PSAs“; Vienna, Austria, 11-15 March 2002;
- Technical meeting on „Development of PSA Quality Guide for Various Applications“; IAEA Headquarters, Vienna 23-27 September 2002;
- Consultation meeting on „Development of PSA Quality Guide for Various Applications“; Vienna, Austria, 27-31 May 2002;
- Workshop on „Harmonization of PSA Methodology Approaches for VVER-440 Reactors and Comparison of PSA Results“; Bratislava, Slovakia, 4-8 March 2002.

Experts actively participated in the organizational part of the meetings and in the development of the resulting documentation.

### 5.1.3. International Agreements

The CENS and US Department of Energy (DOE) signed a Memorandum of Understanding in Vienna on November 20, 2002. Both sides confirmed their wish to continue cooperation through the networking system by developing and sharing information on nuclear safety. The cooperation began with the launch of a project for the Armenian NPP, and through international workshops. In addition, a cooperation agreement was signed with the Scientific and Engineering Center for Nuclear and Radiation Safety (SEC NRS) of Gosatomnadzor, Russia.

### 5.1.4. Cooperation visits

#### **Armenia, August 27-30, 2002**

The August visit of Lubos Tomik to Armenia represented a first step towards establishing cooperation with the Armenian Nuclear Regulatory Authority (ANRA), which was informed of the possibility to become a CENS member.

#### **IRSN**

Mr. L. Tomik met with the representatives of the IRSN in Paris on September 3, 2002. The IRSN is a public organization specialized in expert appraisal, research, information and training in the fields of nuclear safety, radiological protection, and control of nuclear and sensitive material. It provides scientific and technical support for the French Nuclear

Safety and Radioprotection Regulatory Authority. The IRSN took part in the implementation of the pilot course "Regulatory Safety Assessment" held in Bratislava on November 2001, and it is determined to play a supporting role in the development of CENS activities.

### **GRS**

The GRS, mainly through its department for Eastern Europe, has been supporting the CENS as a platform of assistance to CEEC. A first pilot project - the information database DOCU EAST REG - was presented at the CENS Board meeting on November 27, 2002.

### **EBRD**

Contact was established with the EBRD in order to discuss the possibility of its funding a feasibility study within the establishment of the Regional Decommissioning Activity. Several meetings took place in Bratislava, with the involvement of Ms. Silvia Alamo, Senior Project Manager of EBRD.

## **5.2. Technical Activities**

### **5.2.1. Workshops**

The CENS organized four international workshops under the framework and co-operation with the US Department of Energy (DOE) and the IAEA.

- **International Workshop on Safety of First Generation VVER-440 NPPs, 20-24 May 2002, Piestany, Slovakia**
- **International Workshop on Safety of VVER-440/V213 NPPs, 09-14 September 2002, Piestany, Slovakia**
- **International Workshop on Decision Tools on Support of Operational safety of VVER and RBMK NPPs, 17-19 September 2002, Piestany, Slovakia**
- **International Workshop on Safety of VVER-1000 NPPs, 07-11 April 2003, Piestany, Slovakia**
- **International Workshop on Application of Event Analysis Methodologies and Root Cause Analysis and Event Analysis Techniques, 24-28 March 2003, Bratislava, Slovakia**

### **5.2.2. Annual Conference**

The first CENS annual conference was held on September 25, 2002 in Bratislava, and some 80 people attended the inaugural ceremony. Support for the Center's activities was expressed by representatives of Slovak President Mr. Rudolf Schuster and the Slovak Foreign Ministry; Swiss Ambassador to Slovakia Mr. Rudolf Staub; Head of the European Commission Delegation in Slovakia Mr. Eric van den Linden; Ms Annick Carnino and Mr. Arnaud Atger, of the IAEA; Mr. Miroslav Hrehor, of the OECD; Mr. Vince Novak, Director of the EBRD's Nuclear Safety Unit; Mr. J.B. Chérié, Deputy Director of the IRSN, and Ms Marta Ziakova, Chairwoman of the UJD.

The main topics of the conference were "Regulatory Aspects of Decommissioning", and "Practical Experience of Decommissioning in Slovakia".

For the scientific part of the conference important regulatory aspects of decommissioning were presented by Mr. Thomas E. Murley, former director of Nuclear Reactor Regulation (U.S. Nuclear Regulatory Commission). Slovak companies involved in decommissioning, including Slovenské elektrárne, VUJE Trnava, Decom Slovakia, and AllDeco presented the latest procedures and technologies in decommissioning.

### **5.2.3. Development of Course Material**

- **LECTURE COURSE „OTHER EXTERNAL EVENTS IN PSA“**

A draft of the lecture course „Other External Events PSA“ was developed and presented at the National Workshop for PSA Specialists and Practitioners in Methodology Approaches to Internal Fires and Floods, Seismic, and Other External Events PSA, organized by the IAEA and held in Bucharest, Romania, between 9-13

December 2002. The course was developed in the framework of cooperation between the CENS and SWISRUS Project and was designed to complement and improve the Center's technical competence through the transfer of experience and knowledge gained by SEC NRS specialists in SWISRUS-I-II Projects.

The lecture course covers the following topics:

- Selection of External Hazards;
- Natural Hazards Analysis;
- Man-Made Hazards Analysis;
- Collection of Information for External Events PSA.

This lecture course is the starting point for developing a course of PSA basic lectures at the CENS.

- **REGULATORY PSA REVIEW GUIDELINE**

A draft was developed of the „Review Guideline for Level-1 PSA for Internal Initiating Events at Power Level“. This guideline was developed also in the framework of cooperation between the CENS and SWISRUS Project. Like the lecture course for External Events PSA, this guideline is intended to be a starting point for developing the PSA review guidelines that will be used at the CENS.

The completeness and usefulness of the guideline will be tested during the review process in the upcoming Armenia PSA Review Project, performed by the CENS with support from the US DOE and IAEA.

## **6. Operation**

### **6.1. Preparation for ISO Certification**

In line with its mission and vision, and in order to ensure that its work is of a high quality, the Center has decided to develop, implement and continuously improve the Quality Management System (QMS) for improving confidence in the independent safety evaluation of nuclear facilities. This goal can be achieved by integrating all the processes involved in performing core CENS functions into the quality management system framework as represented in STN EN ISO 9001: 2000.

The CENS management expects that implementation of QMS will both increase customer satisfaction and assure a high standard of safety for the national and international community. For that reason, development of QMS is considered a priority.

### **6.2. Communication Channels**

#### **6.2.1. CENS Webpage**

The CENS webpage ([www.censee.org](http://www.censee.org)) was created in August 2002 as a means of providing information related to CENS activities, services, and upcoming events. A powerful tool for explaining the CENS mission, it is updated regularly and ensures easy access to all public information about the Center.

#### **6.2.2. CENS Brochure and Annual Report**

The first CENS information brochure was published in 2002. It provides basic information about the CENS mission, staff, organizational structure and membership. The CENS annual report was published in April 2003. It is available on the CENS web-page.

#### **6.2.3. CENS Newsletters**

The Center periodically publishes electronic newsletters in accordance with CENS activities. These are available on the webpage.

#### **6.2.4. Media**

The CENS has already attracted a great deal of public attention, and the media play an important role in presenting its activities. The first important occasion was the inaugural ceremony of the first annual conference. An announcement of the event was made on Slovak public radio (Slovensky rozhlas). Also, a ten-minute report on the CENS mission and annual conference was broadcast on Slovak public television STV on October 9, 2002. Newspapers, mainly Hospodárske noviny, have also covered the Center's

activities, for example, the meeting with President Rudolf Schuster. The President's Office itself issued a short report of the meeting on the webpage [www.president.sk](http://www.president.sk).

In addition, the CENS was the subject of a report on Swiss public television's science magazine „Menschen Technik Wissenschaft“. A Swiss TV staff member also took part in the visit to Armenia, to the Medzamor NPP, together with Lubos Tomik. The Center also earned publicity on international channel 3sat for the German speaking public in Germany, Austria and Switzerland, which broadcasted the report of Swiss TV's science magazine together with an interview with CENS Board member Lothar Hahn.

## **7. CENS Program Packages for 2003-2004**

### **7.1. Program A – REGULATORY BODY INDEPENDENCE AND EFFECTIVENESS**

**Project 1** – Identification of review and assessment needs

**Project 2** – PSA review for Armenian Nuclear Regulatory Authority (ANRA)

**Project 3** – Analysis of large-release VVER 440/213

**Project 4** – Regulatory guide for alternative fuel design for VVER

### **7.2. Program B – TRAINING**

**Project 1** – Workshops 2003

- **IAEA workshops**

Management of human resources including recruitment, September 22-26, 2003;

Regional workshop and technical meeting for regulatory body self-assessment;

Application of event analysis methodologies and root-cause analysis, March 24-28, 2003

- **US DOE Workshop**

Safety of VVER-1000, April 7 -14, 2003

- **GRS Workshop**

VVER – 440/W-213 Bubble Condenser Containment

- **CENS Training Course**

Severe Accident Analysis and MELCOR Code Training

**Project 2** – Training program for accident analysis (in a CENS-member country)

**Project 3** – Training system for Bulgarian Nuclear Regulatory Agency (BNRA)

**Project 4** – Regulatory staff training modules

**Project 4.1.** – Gap analysis (identification of needs)

**Project 4.2.** – Regulatory culture

**Project 4.3.** – Regulatory inspections

**Project 4.4.** – Nuclear safety

### **7.3. Program C – INFORMATION MANAGEMENT**

**Project 1** – Exchange of regulatory information

**Project 2** – Pilot project: Regulatory Decision Database for UJD

**Project 3** – CENS-GRS Co-operation in DOCU EAST REG Database Development –  
Module Slovakia

**Project 4** – CENS-GRS Co-operation in the area of „Safety upgrading of Units 3 and 4 of  
Bohunice NPP

### **7.4. Program D – CROSS-CUTTING ISSUES**

**Project 1** – Facilitating the establishment of a regional decommissioning network

**Project 2** – Cooperation with the SWISSRUS III project

## 8. Perspective Areas for Co-operation with the Bulgarian Institutions

Based on the current situation and some preliminary discussion and in accordance with the topics of the round table discussion of the BULATOM forum the following areas for co-operation can be discovered:

- **Co-operation for successful organization and accomplishment of the international review of units 3 and 4 in Kozloduy NPP;**
- **Co-operation in establishment of the Regional Decommissioning Centre (RDC);**
- **Benchmark and harmonization of the Strategic Planning Practices;**
- **Safety analysis of the research reactors;**
- **Co-operation in establishment of an association of the WWER.**

## 9. Conclusions

- ↳ The Centre for Nuclear Safety in Central and Eastern Europe (CENS) is a non-profit and independent association supported by the Swiss and Slovak Governments.
- ↳ The main mission of the CENS is to provide an independent platform for technical co-operation between the regulatory authorities of the Eastern and Western countries.
- ↳ The key partners of the CENS are the Swiss Federal Nuclear Safety Inspectorate (HSK), the International Atomic Energy Agency (IAEA), the US Department of Energy (US DOE), the Nuclear Regulatory Authority of the Slovak Republic (UJD), the Gesellschaft für Anlagen-und Reaktorsicherheit mbH (GRS), Germany and the Institute of Radiation Protection and Nuclear Safety (IRSN), France.
- ↳ The CENS program for the 2003–2004 is a good platform for co-operation and information exchange between Eastern and Western countries. It can be considered as a complement to the IAEA activities in the area of short-term and even urgent planning.
- ↳ Based on the current situation and future plans concerning the three main topics of the round table discussion of the BULATOM forum some areas for co-operations between the CENS and the Bulgarian institutions are proposed.

## 10. References

- [1] CENS Presentation to the IAEA Regional Meeting of Europe Recipient Member States, IAEA Headquarters, Vienna, 26 – 30 May 2003.
- [2] CENS Annual Report 2002