



# KNPP REVIEW

KOZLODUY NPP REVIEW

ISSUE 3&4

MAY-AUGUST 2009

KOZLODUY NPP 35 YEARS CLEAN ENERGY

## WANO PEER REVIEW OF UNITS 5 AND 6

The World Association of the Nuclear Operators unites as members nuclear power plant operators across the world. WANO includes 4 regional structures located in Moscow (Russia), Atlanta (USA), Paris (France)



and Tokyo (Japan). The coordinating centre of the association is based in London, (UK). Since 1989 when it was established, WANO has worked to fulfill its key mission – ‘to maximize the safety and reliability of the operation of nuclear power plants by exchanging information and encouraging communication, comparison and emulation amongst its members’.

The peer review programme is among the most important means of WANO to achieve its mission. Participation in the programme is voluntary, while the invitation is issued by the utility. The voluntary and confidential

nature of the activities creates an atmosphere of openness and trust among the partners, which enables adequate exchange of opinions and operating experience. The results from the peer review are summarized in a confidential report, submitted only to the utility. The report identifies the positive aspects in the performance of the plant

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## KOZLODUY NPP PRIORITY - CORPORATIVE SOCIAL RESPONSIBILITY



**STEFKA PETROVA**  
*Head of Human Resources Department*

*The corporative social responsibility policy as declared by the Lead Team is - a principle platform reflected in detail in the programs, related to the corresponding areas.*

### THE SOCIALLY RESPONSIBLE COMPANY

If a Company is to be determined to be a socially responsible company it has to observe a number of priorities, the main of which are as follows:

- To treat its employees well, to ensure equal opportunities for further development to all employees, to

provide fair remuneration and good bonuses.

- To be "green", producing environment friendly products, to be energy saving and effective.
- To take care of the municipality, on the territory of which it operates.
- To manufacture high quality products and provide high quality services, to apply fair pricing, to offer good products at reasonable price.
- To behave in an ethic manner, to be open and fair, to observe the law.
- To take care of society, to help people.
- To donate, to sponsor, to contribute to the development of the society free of charge.
- To offer high quality services to its customers.

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## KOZLODUY NPP 35 YEARS CLEAN ENERGY

### INITIATIVES REGARDING KOZLODUY NPP EMPLOYEES



respect of the personality, protection of rights and interests of employees and individuals as well as the strive to ensure their social status. No any kind of discrimination related to gender, ethnic or political reasons are tolerated at the Plant. Equal rights and prospects are guaranteed for work, development and making career dependent only on qualification, the personal qualities of the individual and the results achieved. When selecting to fill vacancies preference is given to current KNPP employees.

Further training and qualification of staff is encouraged. Additional leave or reduced working time is granted to KNPP employees that continue their university education in specialties applicable at the plant. Language and other similar courses are organized and paid by the plant.

So that feedback is obtained in order to improve human resources management motivation studies are performed on yearly basis -and every six months KNPP employees' opinions that have moved to another position at he KNPP or have left the Company - are analyzed. Based on the results from these analyses sets of corrective measures are proposed with regard to the problem areas and action plans are being developed for the forthcoming year.

The KNPP team of Managers is in fairly good part-

nership with the four Trade Union organizations - Kozloduy NPP Plc which are active in the Plant and supports their activities.

propriety develop- This is the next of a row of consecutive years that the ing a common and Collective labor Contract signed -with the Kozloduy shared by all em- NPP contains conditions by far more favorable than ployees strategy on the labor and insurance conditions as legally provi- future activities. sioned.

This kind of policy The Plant Medical Service performs initial as well is founded on the as periodical exams and medical supervision of staff, analyzes health status of the employees, develops and proposes measures to improve labor conditions and to eliminate health hazards. The Health and Recreation Centre provides perfect opportunities for KNPP staff and their families to add to their healthy way of living.

***“An important detail regarding the socially responsible company is the ease of contact in an atmosphere of openness and frankness between the employees and the managerial staff of the Company. “***

Special attention is paid and resources are invested for KNPP employees and their families' to fully enjoy their spare time. The KNPP Culture House hosts numerous events each month of the year - exhibitions, concerts, theatre performances, meetings and conversations with poets, writers, artists, actors, etc. In addition, currently there are 28 sport sections and teams in which a quarter of the KNPP staff are involved. Many of our teams and sportsmen are medalists from national or - inter-

national competitions.

An important detail regarding the socially responsible company is the ease of contact in an atmosphere of openness and frankness between the employees and the managerial staff of the Company. There are several internal communication channels operating between employees and mangers. One of them - the Intranet - provides information on vacancies, forthcoming sports and cultural events as well as announcements, inquiries on important for the Company problems, latest news, sales etc.



## KOZLODUY NPP 35 YEARS CLEAN ENERGY

### TECHNICAL MEETING IN VIENNA

A technical meeting on the subject Simulators, up-to-date means and technologies for training of people working in nuclear power plants was organized and held by the IAEA from 2 to 5 June 2009 in Vienna.

The latest products of the companies manufacturing simulators and computerized technical means were presented and experience was shared.

The participants in the meeting were introduced to the systems for creating virtual reality that have application in the training of personnel working in areas of high risk. These systems allow simulation of failures as well as visualization (specific colour and sound) of potentially hazardous areas.

The specials from countries with wider practice in the operations of nuclear power plants shared

their experience in terms of training infrastructure establishment, application, licensing and use of FSS as well as the difficulties met and the lessons learnt.

The recommendation of this meeting is that IAEA should take the leadership in the coordination of efforts for the establishment of international standards for simulator licensing both for training and engineering purposes.



*Ivan Kashev, Head of Engineering Support Section, Training Center during a discussion at the meeting*

### SENIOR IAEA REPRESENTATIVE IN KNPP



Mr. Philippe Jamet, Director, Nuclear Installations safety at the Department on Nuclear Safety and Security

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at IAEA had an official visit in Bulgaria from 22 to 25 June 2009 at the invitation of the Nuclear Regulatory Agency. He visited the plant on 23 June 2009 together with the Mr. Tzotchev and other representatives of the NRA where they discussed the history and the present status of Kozloduy NPP, the interaction of the plant with other organizations operating nuclear power reactors VVER type the Bulgarian practice in the use of information from the reports of the International Reporting System (IRS) of IAEA for ensuring safety likewise the OSART mission upcoming in 2 years, the possible assistance that the country can receive in terms of the technical cooperation with IAEA first of all for the forthcoming agreement of the quality management system with the new IAEA standards in this area. After the discussions with the plant management the delegation had a site tour.

reviewed that may prove to be useful to other nuclear power plants round the world, as well as some areas that require further improvement of safety. On 15<sup>th</sup> June 2009, was the official commencement of the WANO peer review in KNPP. The WANO team included of representatives from the four regional centers of the organization, located in Moscow, Paris, Tokyo and Atlanta. Experts come from 10 different countries (16 inspectors and one coordinator), with their total experience in the nuclear field amounting to 412 years. So far they have taken part in a total of 91 peer reviews.

The peer review final meeting was on 26<sup>th</sup> June 2009. At this meeting the experts presented to the plant management their basic conclusions which were later submitted in full details in the official report.



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### OPEN DOORS DAY



13<sup>th</sup> June 2009 was the Day of Open Doors for KNPP. Almost five hundred people from different areas used the possibility to see the plant inside and outside, meet the plant specialists and learn more about nuclear power and nuclear power engineering. The interesting thing is that almost one half of the visitors were youngsters and students. The visitors were from Sofia, Varna, Plovdiv, Pazardzhik, Gabrovo, Ruse, Smolyan, Sofia, Vratsa, Montana and other places in Bulgaria.

*“It was an exciting experience for me to see the Nuclear Power Plant from the inside. I am deeply impressed by the order, the strict working procedures and the complexity of the equipment. If you are staying outside the plant you cannot even imagine the real scale of things, so I learned a lot today. I would visit the plant with pleasure again.”*



*Visit of the turbine hall of Unit 5*

The programme included a tour of the Main Control Room and the Turbine Hall of the 440 MW Unit 2 where Marin Iliev and Tsvetelin Tsenov –Senior Reactor Operators and Christophor Gerdjikov - Shift Unit Supervisor answered the visitors questions.

The other unit that was included in the tour on the 13th June and was the 1000 MW Unit 5. Mikhail Ribin and Georgi Tsolov—Chief Experts on Radiation Safety and the Chief Expert on Engineering Safety Nadezhda Naydenova told about the operations of this unit.

There were also interesting demonstrations of the operation of the fire protection equipment and facilities organized by the KNPP Fire Safety and Protection Service in front of the Information Center as well as real time measurement of the gamma background by the plant mobile laboratory on radioecological monitoring.

*The Main Control Room of Unit 2*





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### POWER ENGINEERS DAY



**YANCHO YANKOV**—Head Operations Department, EP 2, Power Engineer of the year

*Power Engineers Day was celebrated on 20<sup>th</sup> June 2009 by the KNPP workers and employees. For all of us - the people working in the plant this day has become a tradition to estimate professionalism, responsibility and success because these are the keys to hold a leading position in the Bulgarian Power Engineering and to be satisfied with our work and proud of the achievements.*

For a third year in a row the KNPP personnel voted for the most distinguished and meritorious specialists in different professional areas. These were the winners among the nominees for the different categories for 2009:

PLAMEN VASILEV, *SAFETY -SECURITY AND QUALITY*

ANDREY KRASNOTCHAROV, *REACTOR EQUIPMENT*

YORDAN PETROV , *TURBINE EQUIPMENT*

IVAN MITEV, *ELECTRICAL EQUIPMENT*

BOYKO LIKURIEV, *C&P SYSTEMS*

SLAVYAN LATCHEV, *REACTOR OPERATOR*

PETYA SIMEONOVA, *PHYSICIST*

KATYA MINKOVA, *CHEMIST*

VALENTIN PANYOVSKY, *DOSIMETRY*

KIRIL KIRILOV, *CIVIL ENGINEER*

SYIKA PENKOVA, *ECONOMY*





# KOZLODUY NPP 35 YEARS CLEAN ENERGY

## SUCCESSFUL IN AN INTERNATIONAL LABORATORY COMPARISON

The quality and reliability of analyses and measurements of the radioecological monitoring performed at Kozloduy NPP was confirmed at highest level. A vivid proof of the good practices as established during the years at the Radioecological monitoring (RM) laboratories at the Kozloduy NPP are the achievements reported in reputed international laboratory comparisons organized carried



National Physics laboratory. In the beginning of 2009 the RM at Kozloduy NPP was awarded the next of a row of Diplomas to mark its successful participations in the international laboratory comparisons, organized by the World Association ALMERA - an IAEA organization. The KNPP Radiation monitoring department is a full-fledged member of ALMERA since 2006.

out by the International Atomic Energy Agency (IAEA), the German Radiation Protection Service, the World Health Organization and the UK

**RUSSIAN TSIBRANSKY-Head of Radioecological Monitoring Department**

## SUMMER INTERNSHIPS AT KNPP

The summer of 2009 should have been most memorable for those 38 of all 43 university undergraduates to see their applications to have their practice at the Kozloduy NPP approved and their dreams come true. Students joined KNPP teams of



day schedule and prepare and develop the projects they have been assigned by their professors. A major goal for the trainees was to savour the flavour of real everyday team work of KNPP experts in the matter so that they could better make their professional choice not after long. They all kindly ex-



**TIHOMIR MITEV**  
University of Coventry, UK

pressed their admiration for the professionals they had the chance to meet at the KNPP and delight in the set of trainee programs as developed and established. experts in various divisions and departments such as Maintenance, Hydro-technical equipment, Finance and budget, Psycho-physical lab, International programs, etc. to share their intense every-



**KLIMENT TOSHEV**  
Metropolitan University, London



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#### DRY SPENT FUEL STORAGE FACILITY (DSFSF) CONSTRUCTION NEXT STAGE COMPLETED

On July 14 the roof construction of the Dry Spent Fuel Storage Facility (DSFSF) was completed. To mark the occasion representatives of the Builder - German consortium NUKEM Technologies GmbH – GNS GmbH representatives as well as of their subcontractors and EBRD officials -visited the site.

The audience was addressed by **ULF KUTSCHER NUKEM** – GNS, Administrative Director and **BALTHASAR LINDAUER** – Nuclear Safety Deputy Director of the European Bank for Reconstruction and Development (EBRD). On behalf of Kozloduy NPP congratulations were offered by **VALENTIN RIBARSKY** - Head of the decommissioning Division and **PLAMEN VASSILEV** - Head of the Safety Di-

vision. Both, Bulgarian and foreign experts emphasized that the project is being successfully implemented thanks to the attitude and responsibility of all teams involved in the construction.

The Facility includes 1250 sq. m, 21 m in height and shall safely store spent fuel from the VVER-440 reactors for no less than 50 years, complying with all international standards in force.

Agreement was reached with the German consortium and the EBRD for further expansion of the Facility being built which will store 38pcs of CONSTOR 440/84 containers with about 6000 VVER-440 spent fuel assemblies.

#### INTERNATIONAL YOUTH NUCLEAR FESTIVAL "DYSNAI 2009"



*Konstantin Peradze, Stiliyana Mladenova -Velikova,  
Lyubomira Tsonova, Nikolay Nikolov, Stanimir Kalburov*

Four specialists from Kozloduy NPP represented Bulgaria during the XXII Symposium within the International Youth Nuclear Festival "Dysnai 2009". It was held from 27<sup>th</sup> June to 4<sup>th</sup> July 2009 in Visaginas, Lithuania. The Festival was hosted by Ignalina NPP. A lot of young people from Russia, Ukraine, the Czech Republic, Hungary, Lithuania, working in the nuclear industry or just studying nuclear specialties, took part in the Festival. Representatives of the International Association of Young Nuclear Specialists participated as well. A Nuclear Symposium was held in the

framework of the Festival. The Symposium was opened by the Executive Director of Ignalina NPP – MR. VIKTOR SHEVALDIN. He presented the current status of the plant and the activities related to the plant preparation for decommissioning. A welcoming speech was given by MR. VIDAS PAULICAS – Director of Radiation Safety Department, Lithuanian Regulatory Body. His presented the main projects for radioactive waste storage and treatment and equipment dismantling. 15 reports on different topics related to ways of reducing the dose rate, the manufacturing of new generation fuel rods, personnel training at Full Scope Simulator, were discussed.

**STANIMIR KALBUROV** and **STILIJANA MLADENOVA – VELIKOVA**, Senior Reactor Operators at Electricity Production – 2, delivered a report: *PERSPECTIVES FOR NEW NUCLEAR POWER FACILITIES IN BULGARIA*. The participants in the Symposium visited the Full Scope Simulator RBMK-1500 type of the Ignalina NPP. The Senior Instructor at the Training Centre was KONSTANTIN PERADZE who took part as a reviewer of Training and Qualification area in the WANO Peer Review held at Kozloduy NPP within the period 13 ÷ 27 June 2009. The festival was a good way for the young specialists to exchange experience and learn about the good practices applied in the nuclear field in other countries.



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### *WiN Bulgaria*

#### BULGARIAN WINNERS AT THE WIN GLOBAL ANNUAL CONFERENCE

WiNners from all over the world attended the 2009 combined U.S. WiN and WiN Global conference, July 20-24 in Washington DC USA. The conference included plenary sessions on Perspectives on Nuclear technology , Regulation and Managing Risks. The sessions encouraged and educated women on all aspects of nuclear technologies. The conference concluded with plant tours, culture tours and visits with the U.S. Congress. The repre-

sentatives of Kozloduy NPP at the conference were Boyanka Garkova-Head of Administrative Control and Coordination in EP -1 and secretary of WiN Bulgaria and Sonya Elenkova -Expert in Design documentation , EP -2. They delivered a presentation on the current status of the nuclear power engineering in Bulgaria and the main activities of the Bulgarian organization of WiN throughout the year.

## SPORTS



*BEH basketball team at the European Corporate Games in Rovini, Croatia*



*The Bulgarian World Chess Champion for 2005-2006  
VESELIN TOPALOV on a visit to KNPP*

**WE ARE ON  
THE WEB!**

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

## CONTACT US

We look forward to hearing your views. Please feel free to contact us.

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