

**Open Joint Stock Company
«Russian Concern for Electric and Thermal Energy Production
at Nuclear Power Plants»
(Rosenergoatom Concern OJSC)**

**NINTH INTERNATIONAL
SCIENTIFIC AND TECHNICAL CONFERENCE**

**«SAFETY, EFFICIENCY AND ECONOMICS
OF NUCLEAR POWER INDUSTRY»
(MNTK-2014)**

CONFERENCE PROGRAMME

Moscow, May 21–23, 2014

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CONFERENCE PROGRAMME

21 May (1st Day)

- **Registration of participants** (lobby of Building 2 of VNIIAES)
- **Conference opening** (conference hall)
- **Plenary session** (conference hall)
- **Exhibition of the displays and stands of industry's enterprises** (lobby, Building 2)
- **Official dinner** (canteen, Building 2)

22 May (2nd Day)

- **Sessions of MNTK-2014 topical sections (subsections)** (as per allocated rooms)
- **Poster presentations** (as per allocated rooms)
- **Exhibition of the displays and stands of industry's enterprises** (lobby, Building 2)

23 May (3rd Day)

- **Exhibition of the displays and stands of industry's enterprises** (lobby, Building 2)
- **Summing up and closing the conference** (conference hall)

ALLOTTED TIMES

- **for presentation at the plenary session: 15–20 min.**
- **for presentation in section (subsection), including questions and answers: 20–30 min.**

1st Day (Plenary session) working hours: 9.00–19.00

2nd Day (section /subsection) working hours: 9.00–18.00

3rd Day (Plenary session/Conference closing) working hours: 9.30–13.00

CONFERENCE TOPICS

SECTION 1. SAFE AND EFFECTIVE OPERATION OF NPPS

(Chairman: A.V. Shutikov, Deputy Director General – Director for Production and NPP Operation, Rosenergoatom Concern OJSC)

Subsections:

- 1.1. **Operation, maintenance and repair of NPPs with VVER, RBMK, BN and EGP-6 reactors**
(Chairman: O.G. Chernikov, First Deputy Director for Production and NPP Operation, Rosenergoatom Concern OJSC;
Co-chairman: V.A. Mokhov, Chief Designer, JSC EDO “Gidropress”)
Building 1: Rooms 213, 613, 614.
- 1.2. **Engineering support to NPP operations**
(Chairman: N.N.Davidenko, Director of Design Affiliate of Rosenergoatom Concern OJSC;
Co-chairman: A.N.Lupishko, First Deputy Director General of VNIIAES OJSC).
Module building: Rooms 17, 19 (3rd floor)
Building 1: Rooms 615, 1511
Building 2: 3rd floor / center, and 3rd floor / left side.
- 1.3. **Radiation safety, NPP ecology, emergency preparedness**
(Chairman: V.Ye. Khlebtsevich, Deputy Director for Production and NPP Operation – Director of Department for Emergency Preparedness and Radiation Protection, Rosenergoatom Concern OJSC;
Co-chairman: Ivanov Ye.A., Deputy Director General, VNIIAES OJSC).
Building 1: Room 214 (the OPAS hall), and room 215.

SECTION 2. NUCLEAR POWER ECONOMICS

(Chairperson: Ms. A.I. Arkhangelskaya, Deputy Director General – Director for Economics, Rosenergoatom Concern OJSC;
Co-chairman: Yu.V. Nevidomsky, Head of bureau for functional and cost justification, Design Affiliate of Rosenergoatom Concern OJSC).
Building 1: Room 204.

SECTION 3. NUCLEAR POWER DEVELOPMENT

(Chairman: P.L. Ipatov, Deputy Director General – Director for Strategy and Organizational Development, Rosenergoatom Concern OJSC;
Co-chairman: I.I.Kopytov, First Deputy Director General – Director for Design Production, Atomenergoproject OJSC).

Subsections:

3.1. Development of new nuclear power units

(Chairman: A.M. Katsman, Deputy Director for Production and NPP Operation – Head of Office for New Power Units Commissioning Preparedness, Rosenergoatom Concern OJSC;

Co-chairman: Yu.M. Semchenkov, Deputy Director for Science & Organization, NRC “Kurchatov Institute”)

Building 1: Room 1509.

3.2. Advanced nuclear power projects

(Chairman: V.N. Nuzhdin, Deputy Director, Design Affiliate of Rosenergoatom Concern OJSC;

Co-chairman: A.Yu.Kuchumov, Deputy Director for Engineering, Atomenergoprojekt OJSC)

Module building: Room 211 (2nd floor).

SECTION 4. INTERNATIONAL COOPERATION FOCUSED ON ENSURING NPP SAFETY

(Chairman: S.I. Antipov, Deputy Director General for External Economic Affairs and Business Development, Rosenergoatom Concern OJSC;

Co-chairman: M. Lipar, Head of Operational Safety section, IAEA)

Building 2: Conference hall.

SECTION 5. HUMAN RESOURCE FOR NUCLEAR POWER

(Chairman: D.V. Bulavinov, Deputy Director General – Director for Personnel and Social Affairs;

Co-chairman: Yu.P. Saraev, First Vice-Chairman of International Union of Veterans of Nuclear Energy and Industry).

Subsections:

5.1. Training of young specialists for NPPs

(Chairman: D.V. Bulavinov, Deputy Director General – Director for Personnel and Social Affairs;

Co-chairman: Yu.P. Saraev, First Vice-Chairman of IUPA IUVNEI)

Building 1: Room 603.

5.2. Transfer of the veteran traditions and experience to the youth

(Chairman: Yu.P. Saraev, First Vice-Chairman of IUPA IUVNEI)

Building 2: 3rd floor / right side.

PLENARY SESSION PROGRAMME

Building 2: Conference hall

08.30–09.15 Registration of participants (lobby of VNIIAES conference hall)

Chair: Shutikov A.V.

09.15–09.30 **Conference opening.**

Welcome address

Lokshin A.M., State Corporation “Rosatom”

09.30–09.40 **Welcome address**

Romanov Ye.V., Rosenergoatom Concern OJSC

09.40–10.00 Ensuring Safety and Enhancement of Efficiency of Russian Nuclear Power

Asmolov V.G., Rosenergoatom Concern OJSC

10.00–10.20 50 years of Novovoronezh NPP Safe Operation

Fedorov A.I., Novovoronezh NPP

10.20–10.40 Scientific and Engineering Task Solution for Fast Breeder Reactor Operation: from BN-600 towards BN-800

Bakanov M.V., Beloyarsk NPP

10.40–11.00 Restoration of Long-Term Performance of Graphite Structure at Power Unit № 1 of Leningrad NPP

Kudryavtsev K.G., Leningrad NPP

11.00–11.20 Operation of Power Units of Balakovo NPP Using 18-month Fuel Cycle

Bessonov V.N., Balakovo NPP

11.20–11.40 Development and Upgrade of Nuclear Fuel for the Cores of Nuclear Facilities

Lavrenyuk P.I., TVEL Fuel Company OJSC

11.40–12.00 Nuclear Power Industry Safety Issues

Bolshov L.A., Nuclear Safety Institute of the Russian Academy of Sciences

12.00–12.30 Coffee break

Briefing for mass media (Building 1, 2nd floor, OPAS hall)

Chair: Asmolov V.G.

- 12.30–12.50 Perspectives of Development and Implementation of Closed Fuel Cycle
Ponomarev-Stepnoy N.N., Rosenergoatom Concern OJSC
- 12.50–13.10 Operation of Nuclear Power Units at an Increased Level of Rated Power. Prospects of Further Power Uprate up to 107-110%
Shutikov A.V., Rosenergoatom Concern OJSC
- 13.10–13.25 Medium-Size VVER Reactor Plants
Berkovich V.Ya., EDO Gidropress OJSC,
- 13.25–13.40 *Petrinin V.V. OKBM Afrikantov OJSC, NIAEP OJSC, NRC "Kurchatov Institute", Rosenergoatom Concern OJSC*
- 13.40–13.55 VVER Reactor with Spectral Control – the Way to Efficient Utilization of U-238
Semchenkov Yu.M., NRC "Kurchatov Institute"
- 13.55–14.10 Development of Nuclear Energy in China
Chen Zhaobo, State Nuclear Power Technology Corporation (SNPTC), China

14.10–15.10 Lunch

Chair: Ipatov P.L.

- 15.10–15.30 WANO's Post Fukushima Actions
J. Regaldo, WANO
- 15.30–15.50 Ensuring Safety of Ukrainian NPPs
Biley D.V., NNEGK "Energoatom"
- 15.50–16.10 Solution of Scientific and Technical Problems of the Final Stage of RBMK Operation
Dragunov Yu.G., RDIPE OJSC
- 16.10–16.30 The IAEA Fukushima Report and Implementation of the IAEA Nuclear Safety Action Plan
G. Caruso, IAEA
- 16.30–16.50 Rosenergoatom NPP Cost Control in the Environment of Tariff Rise Restrictions
Arkhangelskaya A.I., Rosenergoatom Concern OJSC

16.50–17.20 Coffee break

Chair: Davidenko N.N.

- 17.20–17.40 Issues Concerning Export of Russian Nuclear Power Plants to European Markets
J. Laaksonen, Rosatom Overseas CJSC
- 17.40–18.10 Expected Forecast of Deflections of RBMK-1000 Channels at the Stage of Graphite Cracking
Burlakov Yu.V., NRC “Kurchatov Institute”
- 18.10–18.30 Safety and Effectiveness of Spent Fuel Handling at FSUE “Mining Chemical Combine”
Gavrilov P.M., FSUE “GKhK”
- 18.30–18.50 Scientific-Methodological Basics of Experimental Estimations of Residual Resource Using Technical Diagnostics Means
Makhutov N.A., Machine Science Institute of the Russian Academy of Sciences
- 18.50–19.00 Plenary session summary
- 19.00–20.00 Reception / Buffet**

SECTION SESSION PROGRAMME

SECTION 1. SAFE AND EFFECTIVE OPERATION OF NPPS

Section chairman: A.V. Shutikov, Rosenergoatom Concern OJSC

Subsection 1.1. Operation, maintenance and repair of NPPs with VVER, RBMK, BN and EGP-6 reactors

Subsection chairman: O.G. Chernikov, Rosenergoatom Concern OJSC

Topical area: 1.1.1 Operation of NPPs with VVER reactors

Chairman: Yu.M. Markov., Rosenergoatom Concern OJSC

Co-chairman: V.Ya. Berkovich, EDO Hidropress OJSC

Room 213 (Building 1)

8.45–9.00 Session opening

Markov Yu.M., Berkovich V.Ya.

9.00–9.30 Design solutions for reactor core ensuring safety of VVER-1000 reactor unit operation.

Vasilchenko I.N., EDO Hidropress OJSC

9.30–9.55 Main results of operation and prospects of application of new generation fuel for VVER-440.

Adeyev V.A., Kola NPP

9.55–10.20 Analysis of reactivity induced accident processes in VVER reactors.

Kotsarev A.V., NRC “Kurchatov Institute”

10.20–10.45 Concerning peculiarities of scram signal formation in the AKPN-I system.

Borisenko V.I., NPP Safety Problems Institute of Ukrainian national academy of sciences

10.45–11.00 Coffee break

11.00–11.30 Experience of VVER reactors operation at Tianwan NPP.
China

11.30–11.55 Application of CFD code calculations in analysis of the experimental data for volumetric distribution of coolant temperature in hot legs of VVER-1000 primary circuit loops.

Saunin Yu.V., Atomtechenergo OJSC

11.55–12.20 Temperature control in the SVRK-M system.

Khalizov M.V., NRC “Kurchatov Institute”

- 12.20–12.45 Analysis of operational factors which may lead to loss of leaktightness of VVER FAs.
Evdokimov I.A., TRINITI OJSC.
- 12.45–13.45 Lunch**
- 13.45–14.15 Implementation of design solutions for hydrogen concentration control system at NPPs
Bogdanov S.V., SSC RF IPPE
- 14.15–14.45 Performance of hydrodynamic flushing of SG header pockets at Balakovo Unit 2
Kutdyusov Yu.F., SRCET “CentrenergO” LLC
- 14.45–15.15 Safety justification for a regime of connection of non-operational loop of VVER-1000 reactor without preliminary power reduction
Vitkovsky I.L., Novovoronezh NPP
- 15.15–15.40 Secondary circuit water chemistry in VVER NPPs having no equipment made of copper-bearing alloys.
Tyapkov V.F. VNIIAES OJSC
- 15.40–15.55 Coffee break**
- 15.55–16.20 FA cleaning from deposits using the technical ultrasonic cleaning plant of Novovoronezh Units 3 and 4. Implementation phases and technical characteristics of the plant.
Shvarov V.A., Novovoronezh NPP
- 16.20–16.45 Sources, accumulation and migration of tritium and carbon-14 at VVER NPPs
Zadonsky N.V., NRC “Kurchatov Institute”
- 16.45–17.10 Filtering system for cleaning of steam-gas releases from VVER reactor containment under severe accident conditions
Dulepov Yu.N., SverdNIkhimmash OJSC
- 17.10–17.30 Analysis of operation of steam relief valves BRU-A, BRU-C in the modes with hampered heat removal through the secondary side, in VVER-1000 power unit operation at uprated power levels.
Manontov G.A., VNIIAES OJSC
- 17.30–18.00 Discussion of the presentations.
Session summing up.**

Topical area 1.1.2: Operation of NPPs with channel and fast reactors

Chairman: A.A.Bystrikov, Rosenergoatom Concern OJSC

Co-chairman: V.Ye.Druzhinin, VNIIAES OJSC.

Room 613 (Building 1)

8.45–9.00 Session opening

Bystrikov A.A., Druzhinin V.Ye.

9.00–9.30 Radiation safety in connection with Leningrad NPP Unit 1 graphite stacks life recovery.

Krayushkin A.V., NRC “Kurchatov Institute”

9.30–9.55 Dynamic impacts effect on channel tubes integrity and on stability of the graphite stacks of RBMK power units after the repair.

Tkachev V.V., NRC “Kurchatov Institute”.

9.55–10.20 Analysis of deformation of the graphite stacks using a stochastic model.

Fedosov A.M., NRC “Kurchatov Institute”

10.20–10.45 Discussion of the presentations.

10.45–11.00 Coffee break

11.00–11.20 Neutronics calculation study supporting the RBMK-1000 graphite stacks life recovery.

Rozhdestvensky M.I., RDIPE OJSC

11.20–11.40 Influence of the graphite stack properties change on RBMK-1000 neutronics.

Druzhinin V.Ye., VNIIAES OJSC

11.40–12.00 Precision calculations of RBMK-1000 neutronics parameters.

Rozhdestvensky I.M., RDIPE OJSC.

12.00–12.15 Discussion of the presentations.

12.15–12.35 The GEFEST-800 code complex for operational calculations of BN-800 neutronics.

Seleznev Ye.F., Nuclear Safety Institute of the RAS.

12.35–12.45 Discussion of the presentation.

12.45–13.45 Lunch

13.45–14.15 The MNT-CUDA high-precision code for RBMK operational calculations (Monte-Carlo method based on a graphic processor).

Ivanov I.Ye., VNIIAES OJSC.

14.15–14.45 Simulation of a Blackout-type accident for RBMK-1000 and the use of mobile equipment for prevention of severe consequences.

Mikhailov D.A., NRC “Kurchatov Institute”.

- 14.45–15.15 Justification of the new value for the minimum acceptable strength criterion for graphite of RBMK-1000 stacks. Removal of excessive conservatism.
Kuleshov D.A., NRC “Kurchatov Institute”
- 15.15–15.45 Discussion of the presentations.
- 15.45–16.00 Coffee break**
- 16.00–16.30 Predictional estimations of neutronic and thermohydraulic characteristics of RBMK-1000 Units after completion of the graphite stack life recovery works.
Khrennikov N.N., SEC NRS
- 16.30–17.00 Studies aimed at justification of thermal engineering reliability (critical heat flux ratio) of fuel assemblies in RBMK-1000 fuel channels of an enlarged diameter with possible bowings taken into account.
Brus N.A., EREC OJSC
- 17.00–17.30 Discussion and evaluation of the presentations
- 17.30–18.00 Session summing up**

Topical area

1.1.3. Maintenance, repair and installation of NPP equipment

Chairman: Krupsky A.G., Rosenergoatom Concern OJSC

Co-chairman: Aksenov V.I., Atomenergoremont OJSC

Room 614 (Building 1)

9.00–9.15 Session opening

- 9.15–9.45 Issues and achievements of the Production System of Rosatom in the area of NPP Maintenance and Repair.
Maximov S.V. PSR OJSC.
- 9.45–10.15 Optimization of process operations using the PSR in the M&R of Smolensk nuclear power units.
Aputin V.M., Smolensk NPP
- 10.15–10.45 Welding equipment and technology for narrow groove welding of 850-mm effective diameter pipes of the main circulation pipeline of VVER-1200 NPPs. Development and certification of technologies for repairing weld joints of 850-mm bimetallic pipelines of the Repeated Forced Circulation Circuit of RBMK-1000 using indirect welding.
Khodakov V. D., CNIITMASH OJSC

10.45–11.15 A rig for repair of boundary valves of the primary circuit located below the main flange of RCP of VVER-1000/V-320 power units, without downloading of the reactor core.
Markelov D.A. Balakovo NPP.

11.15–11.30 Coffee break

11.30–11.55 Industrial technologies for the RBMK-1000 graphite stack life recovery.
Shevtsov I.A., Prolog LLC.

11.55–12.20 New technologies in the area of turbine equipment repairing.
Konkin S.V., Atomenergoremont OJSC

12.20–12.40 Development of standards for supplies for repair and operation needs.
Yanchenko Yu.A., Gurinovich V.D., VNIIAES OJSC

13.00–14.00 Lunch

14.00–14.30 Energy saving technologies for NPP running.
Bukharev Ye.Yu., Mayak-93M

15.30–16.00 Prevention of initiation and growth of intergranular stress corrosion cracks in weld joints of austenite 300-mm effective diameter pipelines at RBMK-1000 NPPs.
Babkin L.B., VNIIAES OJSC

16.00–16.30 The NPP safe operation problem and issues of maintenance of its equipment.
Volkov L.P., Alpha-Diagnostics LLC .

16.30–16.45 Coffee break

16.45–17.30 Experience of solving tasks of equipment development for and delivery to new nuclear power units with the M&R documentation complete.
Trebunsky Ye.N., Volgodonsk branch of VNIIAES OJSC.

17.30–18.00 Introduction of a pneumo-hydro-pulse method for NPP turbine unit oil conduits cleaning.
Novikov A.V., VNIIAES OJSC

**18.00–18.30 Discussion of the presentations.
Session summing up.**

Subsection 1.2. Engineering support to NPP operations

Chairman: N.N.Davidenko, Rosenergoatom Concern OJSC

Chairmen: Yu.P.Teterin, Rosenergoatom Concern OJSC

Lupishko A.N. VNIIAES OJSC

Topical area 1.2.1. Diagnostics, enhancement of thermomechanical equipment reliability, modernization and lifetime extension of nuclear power units

Chairman: Yu.P.Teterin, Rosenergoatom Concern OJSC

Co-chairman: S.I.Vasiliev, Rosatom-CIGET

Room 615 (Building 1)

9.00–9.05 Session opening

Sultanov R.M., Rosenergoatom Concern OJSC

9.05–9.15 Welcoming address to session participants.

Makhutov N.A., corresponding member of RAS, Machine Science Institute of the Russian Academy of Sciences

9.15–9.50 Intellectual systems for non-destructive control and technical diagnostics as the basis for NPP safe operation

Klyuev V.V., acad. of RAS, Kuzelev N.P., NIIIN MNPO "Spectrum" CJSC

9.50–10.25 Introduction of the SAKOR system for automated control of residual life at the stage of power unit lifetime extension.

Berkovich V.Ya., Bogachev A.V., Merkun A.V., Nagorny A.O., Shagov Ye.V., EDO Gidropress OJSC

10.25–11.00 Monitoring of NPP civil structures and buildings.

Shirokov A.M., Krivdin D.G., VNIIAES OJSC

11.00–11.15 Coffee break

11.15–11.50 Integrated system for NPP equipment diagnostics as part of the System for NPP lifecycle management.

Myntsov A.A., Promservice CJSC, Kozyrev V.D., Atomtechenergo OJSC

11.50–12.25 3D informational models of a nuclear power unit as the basis for solution of the task of creation of an industry system for nuclear power units diagnostics and life management

Tikhonovsky V.L., Neolant CJSC

12.25–13.00 New diagnostic attributes in the industry-wide diagnostics system of Rosenergoatom Concern OJSC.

Pavelko V.I., Svezhintseva P.Yu., Finkel B.M., "SECD" CJSC

13.00–14.00 Lunch

- 14.00–14.35 Integrated system for VVER reactor unit coolant leak control
*Dvornikov P.A., Kovtun S.N., Budarin A.A., Kondratovich F.V.,
 Kudryaev A.A., Polionov V.P., Titarenko N.N., Shutov P.S.,
 Khryachkov V.A., SSC RF IPPE.*
- 14.35–15.10 Development of algorithmic provision for the leak control system of
 pipelines and equipment of NPP pressurized circuits.
*Matveev Ye.L., “EDC RDIPE” LLC, Matveev A.L., Strelkov P.B.,
 RDIPE OJSC»*
- 15.10–15.45 Enhancement of diagnostics systems using operating experience
 feedback from NPPs with VVER reactors
Kalinin A.N., Pavelko V.I., Finkel B.M., “SECD” OJSC
- 15.45–16.00 Coffee break**
- 16.00–16.20 Extension of Russian NPPs operating life
Gilev V.A., Rosenergoatom Concern OJSC
- 16.20–16.40 VVER NPP operating life extension up to 60 years
Potapov V.V., VNIIAES OJSC
- 16.40–17.00 The second operating life extension for the 1st Generation VVER
 nuclear power
Vitkovsky S.L., Novovoronezh NPP
- 17.00–17.20 Integrated examination of actual conditions of equipment and
 structures of Kozloduy NPP Units 5 and 6.
Tretiakov S.V., Rosenergoatom Concern OJSC
- 17.40–18.00 Extension of operating life of the Leningrad NPP SNF storage facility
Zaika A.V., Leningrad NPP
- 18.00–18.30 Discussion of the presentations.**
Session summing up
Session Participants

Topical area 1.2.2. Enhancement of electric and I&C equipment reliability

Chairman: A.V. Kiryukhin, Rosenergoatom Concern OJSC

Co-chairmen: V.A. Starshinov, MPEI, V.G. Dunaev, VNIIAES OJSC

Module building: Room 19 (3rd floor)

- 9.00–9.15 **Session opening**
Kiryukhin A.V., Rosenergoatom Concern OJSC
- 9.15–9.50 Regarding experience with implementation of CPU RPA in NPP electric installations
Karaulov A.A., VNIIAES OJSC
- 9.50–10.25 Cable life management at nuclear plants: certification and diagnostics
Kononenko A.I., FSUE NIIP
- 10.25–11.00 Diagnostics of technical conditions of power cables with impregnated-paper insulation at NPPs.
Kononenko A.I., Khokhryakov A.V., FSUE NIIP.
- 11.00–11.15 Coffee break**
- 11.15–11.50 Results of technical condition monitoring of turbine generators and power transformers with measurements and localization of vibration and electric discharge induced defects at non-conducting grounded parts, with portable diagnostics means under operational conditions.
Aksenov Yu.P., Rabotalov N.N., Mel'nikov M.Yu., Yaroshenko I.V., "DIAKS" LLC
- 11.50–12.25 Experience with implementation and operation of the EKRA-SKI system for insulation control in operational DC systems at power facilities in Russia.
Alimov Yu.N., Bykov K.V., Galkin I.A., Ivanov A.B., SPE "EKRA" LLC
- 12:25–13:00 Frame protection of electric equipment
Vitsinsky S.A., Mokeev A.S. "Electro" CJSC
- 13.00–14.00 Lunch**
- 14:00–14:25 Specification of RCP nominal operating parameters, determination of additive corrections for loop thermal control at the rated power (determination of mass-average coolant temperature in the main circulation circuit loops) for precision calculation of reactor unit thermal power using the primary circuit parameters adjustment factors.
Arutyunyan A.Kh, Kalinin branch of Atomtechenergo OJSC

- 14:25–14:45 Results of pilot operation of attachable ultrasonic flow meters (Fluxus) installed on the feedwater pipeline of Kursk NPP Unit 4.
Nosov S.N., “Techknow” CJSC.
- 14:45–15:05 Nuclear magnetic flow meters – relaxometers for heavy water parameter control in the coolant system.
Davydov V.V., Karseev A.Yu., St.Petersburg Polytechnical University
- 15:05–15:25 Control of operational parameters of current ionization chambers as part of RPS of RBMK-1000 type reactors
Kuzerin V.V., Kursk NPP
- 15:25–15:45 RPS electric equipment ageing monitoring.
Kalashnikov A.V., Kulakov G.V., Latypov A.G., “VNIIEM Corporation” OJSC.
- 15.45–16.00 Coffee break**
- 16.00–16.20 Architecture of a system for real-time diagnostics of the SVRK information and measurement channels for VVER NPPs.
Saunin Yu.V., Dobrotvorsky A.N., Semenikhin A.V., Atomtechenergo OJSC, Novovoronezh branch of Atomtechenergo OJSC, Musikhin A.M., NRC “Kurchatov Institute”
- 16.20–16.45 Introduction of diversity into neutron flux monitoring equipment.
Sergeev I.A., Strikovskiy V.I., “SKU-Atom” LLC, Yakushev A.G., Ermolaev P.A., VNIIAES OJSC, Pogorelov I.V., EDO Hidropress OJSC
- 16.45–17.05 Integrated solutions for automated process control system designs for NPPs.
Safonov S.I., “Moscow Plant Physpribor” LLC .
- 17.05–17.30 Deterministic approach to safety and risk assessment of information and control systems for nuclear plants.
Korobkin V.V., Scientific and Research Institute for Multiprocessor Computer Systems of the Southern Federal University, Kolodenkova A.Ye., Ufa State Aviation Engineering University.
- 18.00–18.30 Discussion of the presentations.**
Session summing up
Session participants

Topical area 1.2.3 Material science and metal inspections

Chairman: V.N. Lovchev, Rosenergoatom Concern OJSC

Co-chairman: A.Ye. Korneev, SPA CNIITMASH OJSC

3rd floor, left side (Building 2)

9.00–9.15 Session opening

9.15–9.55 Enhancement of methods and means for operational non-destructive control of welded junction of the coolant header to 1200-mm nozzle in PGV-1000 steam generators.

Tikhonov D.S., SPC "Echo+"

9.55–10.35 Information and analysis system – analysis-level subsystem for operational non-destructive control of metal of nuclear plant equipment and pipelines.

Alexandrov A.Ye., SPC "Sigma-IT"

10.35–11.10 Provision for operational erosion-corrosion resistance of weld joints at nuclear power units.

Tomarov G.V., "Geotherm-M" CJSC»

11.10–11.25 Coffee break

11.25–12.05 Technology for recovery annealing of VVER-1000 RPVs.

Gurovich B.A., NRC "Kurchatov Institute"

12.05–12.45 Enhancement of the method for calculation of strength and residual life of VVER-1000 reactor internals for the purposes of operating life extension up to 60 years.

Margolin B.Z., FSUE "CRISM Prometey"

12.45–13.45 Lunch

13.45–14.25 Two-parameter criterion for heat exchanging tube plugging in VVER NPP steam generators.

Lunin V.P., NRU "MPEI"

14.25–15.05 Development and introduction of a method for estimation of operating life of welded junction of the coolant header to 1200-mm nozzle in PGV-1000 steam generators.

Kazantsev A.G., SPA CNIITMASH OJSC

15.05–15.45 Development of guidance on application of the Leak Before Break concept to pipelines of the existing nuclear power installations.

Kisilev V.A., RDIPE OJSC

15.45–16.25 Alteration of VVER-1000 RPV material properties in course of operation up to 60 years.

Zhurko D.A., NRC "Kurchatov Institute"

16.25–16.45 Coffee break

- 16.45–17.25 Development and certification of the system for eddy current control of heat exchanging tubes of VVER NPP steam generators using matrix-type sensors.
Salischev S.A., “CVK Polytest” LLC
- 17.25–18.05 The use of the EDO Hidropress calculation and analysis approach to justification of extension of the period between two consecutive inspections of the primary circuit equipment and pipelines metal at VVER NPPs.
Golubeva O.V., EDO Hidropress OJSC
- 18.05–18.30 Discussion of the presentations.**
Session summing up
Session participants

Topical area 1.2.4. RW and SNF management. NPP power units decommissioning

Chairman: M.R. Stakhiv, Rosenergoatom Concern OJSC

Co-chairman: A.E. Arustamov, “Alliance-Gamma” CJSC

1.2.4.1. Topical session on “ RW management; NPP power units decommissioning”

Chairman: S.A. Nemytov, Rosenergoatom Concern OJSC

Building 2: 3rd floor / center

- 9.00–9.15 Session opening.**
Welcoming address to MNTK participants
Stakhiv M.R., Rosenergoatom Concern OJSC
- 9.15–9.35 Main tasks and challenges related to implementation of the Federal Law of 11 July № 190-FZ “On radioactive waste management”
Dorofeev A.N., Rakitskaya T.G., State Corporation “Rosatom”
- 9.35–9.55 Preparation to decommissioning of Leningrad nuclear power units
Kuznetsov A.N., Leningrad NPP
- 9.55–10.15 SRW management at Kalinin NPP
Nakoskin A.V., Kalinin NPP
- 10.15–10.35 Approaches to solution of the problem of RW characterization at Russian NPPs
Korotkov A.S., VNIIAES OJSC
- 10.35–10.55 Options of ion exchange resins management at NPPs
Savkin A.Ye., FSUE “Radon”

10.55–11.15 Feasibility assessment of LRW management options at Beloyarsk NPP
Doilnitsyna V.V., "RAOPROEKT" OJSC

11.15–11.30 Coffee break

11.30–11.50 Establishment of an informational system for state account and control of radioactive material and RW in SC "Rosatom" and, as its integral part, an information system supporting the RW management system in Rosenergoatom Concern OJSC
Morozov M.A., "Neolant" OJSC

11.50–12.10 Overview of international experience (Czech Rep., Slovak Rep., Lithuania, Bulgaria) of establishment and use of systems for RW exemption from regulatory control. Modern IAEA approaches to application of characterization with the aim of RW exemption from regulatory control.
Mirsky V., "Neolant" OJSC

12.10–12.30 Creation of RW plasma treatment complex facility at NV NPP
Schukin A.P., Pilot Demonstration Engineering Center

12.30–12.50 Plants for incineration of combustible SRW and LRW at NPPs and nuclear fuel cycle enterprises
Korneev V.I., "Alliance-Gamma" CJSC

12.50–13.10 Overview of experience and capacities of AVERO association members in the field of decommissioning of nuclear- and radiation-dangerous facilities
Mansurov O.A., Nuclear Facility Decommission Association AVERO

13.10 -14.00 Lunch

14.00–14.20 Experience from radiation examination of shutdown uranium-graphite reactors
Pavlyuk A.O., Pilot Demonstration Center for Uranium-Graphite Reactors Decommissioning

14.20–14.40 Objective limitations for high-level processing of radioactive concentrates and way to solve the problem
Vinnitsky V.A., SPbSTI-TU

14.40–15.00 Experience with application of technology and equipment for SRW ultrasonic decontamination in course of nuclear power units decommissioning
Lebedev N.M., "Alex+" LLC

15.00–16.30 Discussion of the presentations

16.30–16.45 Coffee break.

**16.45–17.00 Session summing up
Session participants**

Topical session 1.2.4.2. on “SNF management”

Chairman: Yu.M. Lobkov, Rosenergoatom Concern OJSC

Module building: Room 17 (3rd floor)

9.00–9.15 Session opening.

Welcoming address to MNTK participants

Lobkov Yu.M., Rosenergoatom Concern OJSC.

- 9.15–9.45 Prospects of domestic manufacturing of transport containers with the case made of high-strength nodular iron
Andreev V.V., SPA CNIITMASH OJSC
- 9.45–10.15 Calculation and experimental determination of burnup level, isotopic composition and residual heat of spent nuclear fuel.
Chernov V.A., SSC RF IPPE
- 10.15–10.35 Thermoresistant neutron protection material
Dolgorukova A.G., FSUE “RFNC-VNIITF” n.a. acad. E.I.Zababakhin
- 10.35–10.55 Calculation and experimental studies to justify safe management of spent nuclear fuel from uranium-graphite reactors
Nikolaev S.A., SSC RF IPPE
- 10.55–11.15 Problems of pilot operation of SNF container storage complex facilities and ways towards their solution.
Buzinov N.V., Leningrad NPP
- 11.15–11.30 Coffee break**
- 11.30–11.50 Subcriticality control in fuel pool of Leningrad NPP SNF storage facility in course of transition to dry storage of SFAs.
Borodich S.S., Leningrad NPP
- 11.50–12.10 The use of mobile robotic complex unit in fuel pools of the 1st stage Units of Beloyarsk NPP.
Abitov R.Ya., Beloyarsk NPP »
- 12.10–12.30 Technology for water purification in the SFA disassembly pool of AMB reactors of Beloyarsk NPP
Minakov V.A., “Alliance-Gamma” CJSC
- 12.30–12.50 Development of emission tomographs for SNF monitoring.
Vlasov V.V., FSUE “RFNC-VNIITF” n.a. acad. E.I.Zababakhin
- 12.50–14.00 Lunch**
- 14.00–14.20 Implementation of automated process control systems for SNF management
Podgornov V.A., FSUE “RFNC-VNIITF” n.a. acad. E.I.Zababakhin

14.30–15.00 Calculation of duration of vacuum dryout of metal-concrete container for SNF transportation and storage.
Karyakin Yu.Ye., SPbSPU

15.00–15.30 Coffee break

15.30–17.00 **Discussion of the presentations**
Session summing up
Session participants

Topical area 1.2.5. Fire Safety

Chairman: V.V. Nikiforov, Technology Affiliate of Rosenergoatom Concern OJSC
Co-chairman: A.G. Zbarsky, Atomenergoproject OJSC

Room 1511 (Building 1)

9.00–9.15 Session opening

Nikiforov V.V., Technology Affiliate of Rosenergoatom Concern OJSC

9.15–9.30 Fire safety status of NPPs and the main area of activities in the field of fire safety improvement

Nikiforov V.V., Fire Safety Service of Rosenergoatom Concern OJSC

9.30–9.45 Application of mobile fire extinguishing means for elimination of fires at NPPs under extreme low outdoor temperatures

Aleshkov M.V., State Fire Service Academy of Emercom of Russia

9.45–10.00 Assessment of fire uprising risks at nuclear power facilities in EU countries.

Jan Kondrac Risk Consult, LTD, Slovak Rep.

10.00–10.20 Organization of fire protection system at NPPs. Compliance with decisions and agreements regulating interactions with Emercom of Russia.

Kharevsky V.A., Fire Safety Service of Rosenergoatom Concern OJSC

10.20–10.35 Scientific approaches to ensuring safety of modern NPPs

Putsev D.I., All-Russia Scientific & Research Institute of Fire Defense

10.35–11.15 Implementation of modern scientific and engineering solutions in the automated fire detection and extinguishing systems

Fomin V.I., State Fire Service Academy of Emercom of Russia.

Co-Speaker: Fedyaev S.L., “SPC Dedal”, OJSC.

Co-Speaker: Kabeda S.A. “Rubezh” LLC

11.15–11.30 Coffee break

- 11.30–11.45 Status of active fire protection systems at Beloyarsk NPP
Units № 1, 2, 3, 4.
Volokitin A.P., Beloyarsk NPP
- 11.45–12.05 Fire safety provisions at NPPs under construction. Introduction of
fire safety regulation documents at NPPs under construction.
Sazykin V.I., Fire Safety Service of Rosenergoatom Concern OJSC
- 12.05–12.20 Application of water mist fire extinguishing systems for NPP
facilities.
Lanin D.I., Fire Safety Service of Rosenergoatom Concern OJSC
- 12.20–12.40 Issues of state fire supervision execution at the existing NPPs.
*Uvarov A.V., Department for supervision activities of Emercom of
Russia*
- 12.40–13.00 NPP fire protection design standards
Lobanova N.A., St.Petersburg Atomenergoproject OJSC
- 13.00–14.00 Lunch**
- 14.00–14.15 Operation of Smolensk NPP fire protection systems.
Shvedov V.V., Smolensk NPP
- 14.15–14.30 Ensuring fire safety for Kursk Unit 4 operating life extension.
Usik V.V., Kursk NPP.
- 14.30–15.30 Contributions (5 min) from heads of fire safety divisions of
Balakovo, Bilibino, Kalinin, Kola, Leningrad, Novovoronezh, Rostov
NPPs.
- 15.30–16.30 Discussion of the presentations.
- 16.30–16.45 Coffee break**
- 16.45–18.00 Discussion and making conclusions on the issues considered at the
session 1.2.5 - delegates and participants.**
- 18.00–18.30 Session summing up**

Subsection 1.3. Radiation safety, NPP ecology, emergency preparedness

Chairman: V.Ye. Khlebtsevich, Rosenergoatom Concern OJSC

Co-chairman: Ivanov Ye.A., VNIIAES OJSC

Building 1: Room 214 (the OPAS hall)

9.00–9.15 **Session opening**

Welcoming address

Khlebtsevich V.Ye., Rosenergoatom Concern OJSC

9.15–9.45 Integrated assessment of NPP radiological impact on the environment using the data from complex monitoring of radiological situation.

Kryshev I.I., SPA “Typhoon”.

9.45–11.15 *Discussion of the presentation, overview of poster presentations, discussion of topical issues of environmental situation assessment in NPP placement region.*

11.15 -11.30 Coffee break

11.30–12.30 Radioecological situation in NPP placement region as applicable to underground and superficial waters.

Glinsky M.L., FSUGP “Gidrospecegeology”.

12.30–13.00 *Discussion of the presentation, overview of poster presentations, discussion of topical issues of radioecological monitoring in NPP placement region.*

13.00–14.00 Lunch

14.00–14.40 EDF nuclear rapid response force: Tasks and current status

Bertrand Dirlík, Electricite de France (France).

14.40–15.10 *Discussion of the presentation, overview of poster presentations, discussion of topical issues of rapid response force actions in an emergency at a NPP*

15.10–15.35 Standard values for maximum acceptable releases and discharges – establishment issues.

Ivanov Ye.A., VNIIAES OJSC

15.35–16.00 Contribution of radionuclides carried away from spray pool surface to NPP release activity.

Stroganov A.A., SEC NRS

16.00–16.30 *Discussion of the presentations, overview of poster presentations, discussion of topical issues of regulation of radiological impact on the public.*

Session participants.

16.30–16.45 Coffee break

- 16.45–17.30 Optimization of occupational exposure at NPPs taking into account risks of negative effects of ionizing radiation.
Chekin S.Yu., FSBE MRSC of Russian Ministry of Health
- 17.30–18.00 *Discussion of the presentations, overview of poster presentations, discussion of topical issues of establishment and ensuring of efficient functioning of the radiation risk management system in Rosenergoatom Concern OJSC.*
Session participants.
- 18.00–18.30 Discussion of the presentations**
Session summing up

Building 1: Room 215

9.00–9.15 Session opening

- 9.15–10.15 Environment protection at Russian NPPs – current status and prospects.
Pechkurov A.V., Palitskaya T.A., Rosenergoatom Concern OJSC.
- 10.15–11.15 *Discussion of the presentation, overview of poster presentations, discussion of topical issues of the environment protection at Russian NPPs*
Session participants
- 11.15–11.30 Coffee break**
- 11.30–12.15 Hydrothermal regime of Kalinin NPP water reservoir – existing problems and activities aimed at its optimization.
Danilkin A.Yu., Kalinin NPP
- 12.15–13.00 *Discussion of the presentation, overview of poster presentations, discussion of topical issues of hydrothermal regime of plant water reservoirs.*
Session participants. Moderator – Mr Pechkurov A.V.

13.00–14.00 Lunch

- 13.00–14.15 Microclimate changes around NPP cooling reservoir
Turundaev A.E., SRNU MEPhI
- 14.15–16.30 Discussion of the presentations
- 16.30–16.45 Coffee break**
- 16.45–18.00 Discussion and making conclusions on the issues considered**
- 18.00–18.30 Discussion of the presentations.**
Session summing up

SECTION 2. NUCLEAR POWER ECONOMICS

Section chairperson: Ms. A.I. Arkhangel'skaya, Rosenergoatom Concern OJSC
Co-chairman: Yu.V. Nevidomsky, Design Affiliate of Rosenergoatom Concern OJSC

Building 1: Room 204

9.00–9.15 Session opening

Arkhangel'skaya A.I., Rosenergoatom Concern OJSC

9.15–9.40 Rosenergoatom Concern OJSC involvement in advanced models of wholesale electricity and power markets.

Khval'ko A.A., Rosenergoatom Concern OJSC

9.40–10.05 Estimated liabilities for RW and SNF.

Shalimov A.V., Lymar V.V., Rosenergoatom Concern OJSC

10.05–10.30 Simulation of the “Treasury” group of processes of Rosenergoatom Concern OJSC.

Sheptyakov D.G., Rosenergoatom Concern OJSC

10.30–10.55 About the role of the State Programme on “Atomic Industry Complex Development” in the Rosenergoatom Concern OJSC activities

Bokarev B.A., Rosenergoatom Concern OJSC.

10.55–11.15 Methodological peculiarities of the NPP tariff setting

Medyakova T.N., Rosenergoatom Concern OJSC, Solovieva S.V., Bilibino NPP.

11.15–11.30 Coffee break

11.30–12.00 *Criteria of efficiency of investments in nuclear power.*

Kharitonov V.V. SRNU MEPhI

12.00–12.30 Methodology for cost estimation of NPP construction abroad at the pre-project stage.

Vikhansky N.I., SC “Rosatom”

12.30–13.00 The use of “economic cross” method in calculations related to innovative nuclear fuel for the nuclear power industry.

Putilov A.V., SRNU MEPhI

13.00–14.00 Lunch

14.00–14.30 Challenges of ensuring quality of human capital assets in the nuclear power areas of activity such as safety, efficiency and economics

Abramova V.N., SRNU MEPhI

14.30–15.00 The main activity areas aimed at NPP energy efficiency improvement.

Kruglikov P.A., Smolkin Yu.V., SPA “CKTI”

- 15.00–15.30 Assessment of economic efficiency of the works on RBMK graphite stack operating life recovery.
Molokanov N.A., RDIPE OJSC»
- 15.30–16.00 NPPs in the Russian model of electricity and power market.
Smirnova L.S., Rodionova Ye.V., NRC “Kurchatov Institute”
- 16.00–16.30 Application of simulation modeling for decommissioning cost estimation at the stage of new nuclear power unit designing/
Noskov A.A., Design Affiliate of Rosenergoatom Concern OJSC
- 16.30–16.45 Coffee break**
- 16.45–17.15 Methodology for calculation of production costs and selling tariffs on the power industry products from the viewpoint of the energy balance.
Budylov Ye.G., SSC RF IPPE
- 17.15–17.45 Optimization of nuclear plants’ logistics systems.
Portnov A.S, Consulting company
- 17.45–18.30 Discussion of the presentations.**
Session summing up
Session participants

SECTION 3. NUCLEAR POWER DEVELOPMENT

Section chairman: P.L. Ipatov, Rosenergoatom Concern OJSC

Section co-chairman: I.I. Kopytov, Atomenergoproject OJSC

Subsection 3.1. Development of new nuclear power units

Subsection chairman: A.M. Katsman, Rosenergoatom Concern OJSC

Subsection co-chairman: Yu.M. Semchenkov, NRC "Kurchatov Institute"

Room 1509 (Building 1)

- 9.00–9.15 **Session opening**
*A.M. Katsman, Rosenergoatom Concern OJSC,
Yu.M. Semchenkov, NRC "Kurchatov Institute"*
- 9.15–9.45 Optimization of approaches to power units commissioning to operation.
*V.P. Deriy, N.B. Shestakov, Atomtechenergo OJSC, Kalinin branch of
Atomtechenergo OJSC "KalininAtomtechenergo"*
- 9.45–10.25 Optimization of equipment installation processes for BN-800 reactor unit.
Equipping the BN-800 reactor unit with process parameter control means.
V.Yu. Sedakov, "OKBM Afrikantov OJSC
- 10.25–10.50 Development of new medium-size nuclear power units.
A.V. Yashkin, Ye.V. Tolstov, "NiAEP" OJSC.
- 10.50–11.15 Development of turbine units for a VVER-TOI NPP on the basis of the Power Machines OJSC equipment.
S.A. Ivanov, S.Yu. Zabrodov, Power Machines OJSC
- 11.15–11.30 Coffee break**
- 11.30–12.00 Technical diagnostics as an element of NPP life cycle management.
V.D. Kozyrev, Rostov branch of Atomtechenergo OJSC
- 12.00–12.30 Topical issues of diagnostic support to valves and rotating mechanisms at pre-operational stages of NPP life cycle.
V.L. Rachkov, Rostov branch of Atomtechenergo OJSC
- 12.30–13.00 Ensuring the design life of equipment and pipelines under conditions of long-term operation.
A.I. Arzhaev, Atomtechenergo OJSC
- 13.00–14.00 Lunch**
- 14.00–14.30 Ensuring safe operation of the nuclear power unit equipment and pipelines potentially susceptible to FAC.
M.A. Podlatov, Atomtechenergo OJSC

- 14.30–15.00 Selection of a methodology for confirmation of seismic resistance of NPP equipment.
S.I. Ryasny, P.S. Kaznovsky, A.V. Shugorev, Atomtechenergo OJSC
- 15.00–15.30 Analysis of results of Unit 3 containment pre-stressing at Rostov NPP.
V.N. Medvedev, Nuclear Safety Institute of the RAS.
- 15.30–16.00 Material science aspects of improvement of operational safety of VVER-type power installations based on improvement of RPV steel.
I.V. Teplukhina, FSUE “CRISM Prometey”
- 16.00–16.30 Risk management during transition to non-departmental organizational structure of NPP.
A.A. Khmelev, VNIIAES OJSC
- 16.30–16.45 Coffee break**
- 16.45–17.10 Training of the personnel to perform pre-startup adjustment works during nuclear power unit commissioning.
V.P. Ivakin, Novovoronezh Training Center of Atomtechenergo.
- 17.10–17.35 The information system “Pre-startup adjustment activities supporting portal”.
N.V. Pleshakova, Smolensk Training Center of Atomtechenergo
- 17.35–18.00 Personnel training using the “Professional” remote education system.
A.V. Serdyuk, A.V.Kirienko, M.Yu.Trigub, Smolensk Training Center of Atomtechenergo
- 18.00–18.30 Discussion of the presentations.**
Session summing up
Session participants

Subsection 3.2 Advanced nuclear power projects

Subsection chairman: V.N. Nuzhdin., Design Affiliate of Rosenergoatom Concern OJSC

Subsection co-chairman: A.Yu.Kuchumov, Atomenergoproject OJSC

Room 211 (2nd floor, Module building)

9.00–9.15 **Session opening**

9.15–9.45 Some prospects of the nuclear power industry development based on the use of reactors with water coolant.

Blagoveschensky A.Ya., Mityukov V.N. (SPbSPU).

9.45–10.15 Provisions for VVER nuclear power unit operation in maneuver and load-follow modes (100-50-100)% of P_{nom} with the main energy efficiency parameter retained, on the basis of integrated application of a high-voltage variable-frequency electric drive.

Zykov A.S. (Atomenergoproject OJSC).

10.15–10.45 Calculation safety justification of BREST OD-300 reactor pressure vessel for seismic impacts; Analysis of durability and failure resistance of reinforced concrete structures of NPP reactor building

Lukin A.V. (SPbSPU)

10.45–11.15 Mechanism of protective fluoride coating formation at steel surfaces contacting with freons prospective for BREST-type NPP

Zagrebayev S.A. (SSC RF IPPE)

11.15–11.30 **Coffee break**

11.30–12.00 Optimization of composition of radiation shield concretes for new generation NPPs.

Engovatov I.A. (Moscow State University of Civil Engineering).

12.00–12.30 Use of VVER-SCP in the altering part of the loading schedule while retaining a high level of safety and reliability.

Sirotkina A.L. (SPbSPU)

12.30–13.00 Technical and economic characteristics of the evolutionary SUPER-VVER (VVER-S-1250)

Chibinyaev A.V. (NRC "Kurchatov Institute").

13.00–14.00 **Lunch**

14.00–14.30 Prospects of NPP economic efficiency increase by means of using water with supercritical parameters

Sedov A.A. (NRC "Kurchatov Institute").

14.30–15.00 Mathematical model of reactor core thermohydraulics for supercritical nuclear reactors.

Chusov I.A. (Obninsk IAE of SRNU MEPhI)

- 15.00–15.30 Regularities of critical heat flux conditions appearance in fuel elements of VVER reactors under supercritical pressures.
Saraf B.A. VNIIAM OJSC
- 15.30–16.00 Radiochemical material science of functional coatings of fission chambers of Reactor Control & Protection systems
Egorov A.V. (VNIKhT OJSC)
- 16.00–16.30 Standalone passive systems for emergency cooling of reactor installations based on two-phase thermosiphons
Sviridenko I.I., Sviridenko N.N. (Sevastopol National Technical University)
- 16.30–16.45 *Coffee break***
- 16.45–17.15 The studies supporting justification of a cold trap embedded in reactor vessel
Alexeev V.V. (SSC RF IPPE)
- 17.15–17.45 Experimental studies of thermohydraulic parameters of air-cooled heat exchanger of ECCS
Sorokin A.P. (SSC RF IPPE)
- 17.45–18.30 Discussion of the presentations.**
Session summing up
Session participants

SECTION 4. INTERNATIONAL COOPERATION FOCUSED ON ENSURING NPP SAFETY

Section chairman: S.I. Antipov, Rosenergoatom Concern OJSC

Section co-chairman: M. Lipar, IAEA

Conference Hall (Building 2)

9.00–9.15 Session opening

9.15–10.00 International scientific and technical cooperation as an effective way of obtaining new knowledge and experience
Antipov S.I., Rosenergoatom Concern OJSC

10.00–10.45 Activities of WANO Moscow Center aimed at safety improvement
Chudakov M.V., WANO Moscow Center

10.45–11.25 Regarding the cooperation with NEA/OECD
Andreeva-Andrievskaya L.N., SC Rosatom

11.25–11.40 Coffee break

11.40–12.20 EDF outline and Post-Fukushima safety improvements — Practical implementation and challenges
M. Debes, Electricite de France (France)

12.20–13.00 Lessons learned from severe accident at Fukushima-Daiichi NPP
Aparkin F.M., IAEA

13.00–14.00 Lunch

14.00–14.30 Liability for nuclear damage: international cooperation issues
Olbinskaya N.I., Rosenergoatom Concern OJSC, and Arsent'ev S.V., SRNU MEPhI

14.30–15.00 Completion of the first round of insurance inspections at Rosenergoatom facilities
Babenko S.V., RANI

15.00–15.30 30 years of OSART programme: Achievements, challenges and future evolution
M. Lipar, IAEA

15.30–16.00 Safety culture. Peculiarities of introduction in various professional communities and countries in Asian-Pacific region
Khaletskaya M.V., Rosatom-CICET

16.00–16.30 The Materials Ageing Institute (MAI) and joint activities with Rosenergoatom in the R&D field
J. van der Lee, MAI, M.Debes, Electricite de France (France)

16.30–16.45 Coffee break

- 16.45–17.15 International cooperation to increase severe accident safety with application of the IVMR strategy for VVER-1000 Units
J. Zdarek , J. Duspiva, NRI Rez, a. s. (Czech Republic)
- 17.15–17.45 Organization of the aftersales service at VVER NPPs abroad.
Kuzmin V.P., Dementiev V.N., Rusatom Service CJSC
- 17.45–18.30 Discussion of the presentations.**
Session summing up
Session participants

SECTION 5. HUMAN RESOURCE FOR NUCLEAR POWER

Subsection 5.1. Training of young specialists for NPPs

Chairman: D.V. Bulavinov, Rosenergoatom Concern OJSC

Co-chairman: Yu.P. Saraev, IUPA IUVNEI

Room 216 (Building 1)

9.00 – 9.15 Session opening

Coordination with higher education institutions and education of students

9.15–11.15 Innovative model of specialists education for the nuclear power industry

Lebedev Yu.V., Rostov NPP, Rudenko V.A., Bublikova I.A., Zayarov Yu.V., Volgodonsk Engineering and Technical Institute – the branch of NRSU “MEPhI”

Organization of practical training at Kalinin NPP: the “8th semester” project

Zhuravleva V.S., Kalinin NPP

Proactive development of professional competences of potential HR.

Experience of “RusGidro” OJSC

Venediktov V.V., “RusGidro” OJSC

Discussion of the presentations. Summing up the topic.

11.15–11.30 Coffee break

Tutorship

11.30–13.30 Development of tutorship programme for the Smolensk NPP succession pool *Terpetsky A.A., Ilgasheva Ye.A., Shindina M.M., Smirnova L.L., Smolensk NPP*

Tutorship programme in the VNIIA n.a. Dukhov

Petrova L.V., FSUE “VNIIA n.a. Dukhov”

Discussion of the presentations. Summing up the topic.

13.30–14.30 Lunch

Professional training (TCs)

14.30–16.30 Role of the instructor in ensuring NPP safety

Ovdak K.V., Novovoronezh NPP

New approaches to simulator training of the operators

Serednev V.V., Balakovo NPP

Modern means of simulation modeling, information simulators and virtual reality for increasing efficiency of young specialists training for NPPs

Ozerov K.I., "Neolant" CJSC

Conduction of training within the practical arrangements with IAEA: Lessons learned and experience gained in the Central Institute for Continuing Education and Training of the State Corporation "Rosatom"

Artisyuk V.V., Rosatom-CICE&T

Discussion of the presentations. Summing up the topic.

16.30–16.45 Coffee break

16.45–17.30 Poster session

**17.30–18.00 Discussion of the presentations.
Session summing up**

Subsection 5.2. Transfer of the veteran traditions and experience to the youth

Chairman: Yu.P. Saraev, IUPA IUVNEI

Building 2: 3rd floor / right side

9.00–9.15 Session opening

Information on activities of the International Union of Veterans of Nuclear Energy and Industry in the period from 2010 (since its establishment) to 2014.

Akimov Ye.M.

9.15–11.15 Durability of structural alloys

Gorbatykh V.P.

Natural lighting systems for all types of VVER-1000 plant premises.

Kazakov V.A.

The "Nuclear Professionals" management certification

Mazalov A.T.

Succession of generations means the growth of economic efficiency of SC "Rosatom" activities

Morozova A.A.

11.15–11.30 Coffee break

11.30–14.00 Influence of the veterans' movement on nuclear power development and ways to increase its efficiency

Saraev Yu.P., IUPA IUVNEI

Principle of functioning of the electrochemical protection using impulse methods .

Petukhov V.S.

Regarding appropriateness and necessity of Russian nuclear industry veterans' involvement into the international cooperation.

Poroykov V.S.

Compilation of technical proposals as regard to development of a system for NPP pipeline electrochemical protection from corrosion using impulse currents.

Terekhin Yu.K.

13.00–14.00 Lunch

14.00–16.30 Radiochemical treatment of RW – a key to nuclear power progress

Kiss Zoltan J.

Devices using phased arrays for increasing the credibility of pipeline inspection at nuclear plants – the need in development and implementation at NPPs.

Kozin Yu.N.

Introduction of a system for nuclear knowledge management in VNIIAES OJSC.

Tolstenkov A.N.

16.30–16.45 Coffee break

16.45–18.00 Ensuring of preservation and transferring of the nuclear power unit configuration knowledge.

Tikhonovsky V.L., Salnikov N.V.

High-efficient thermal installations and systems with coaxial heating elements and coaxial heating cables .

Stepanchuk G.N..

**18.00–18.30 Discussion of the presentations.
Session summing up**

PLENARY SESSION / CONFERENCE CLOSING

Conference hall (Building 2)

09.30–9.40 Plenary session opening

Asmolov V.G., Rosenergoatom Concern OJSC

09.40–11.00 Section chairmen reports (round table)

11.00–11.30 “Best sectional report” competition — Summary

11.30–12.30 Discussion. Contributions from representatives of NPPs, enterprises and organizations

**12.30–13.00 MNTK-2014 summing up.
Conference closing.**

13.00–14.00 Briefing for mass media

REFERENCE INFORMATION

Organizational and Programme committees

- Shutikov A.V. — Deputy Director General – Director for Production and NPP Operation,
Chair of the Organizational committee
- Asmolov V.G. — First Deputy Director General,
Chair of the Programme committee
- Antipov S.I. — Deputy Director General for External Economic Affairs and Business Development
Vice-Chair of the Organizational committee;
- Davidenko N.N. — Director of Design Affiliate of Rosenergoatom Concern OJSC, *Vice-Chair of the Organizational committee*
- Ipatov P.L. — Deputy Director General – Director for Strategy and Organizational Development, *Vice-Chair of the Programme committee;*
- Aksenov Ye.G. — Director, Department for Informational Technologies;
- Arkhangelskaya A.I. — Deputy Director General – Director for Economics;
- Belyakov O.A. — Head, Office for NPP Operation, EREC OJSC;
- Bystrikov A.A. — Director, Department for Channel and Fast Reactor Operation;
- Demidova L.N. — Director, Department of Economics and Controlling;
- Yegorov A.A. — Deputy head of Office for household and administration support –head of administrative support division;
- Yevdokimov S.I. — Head, Editorial and Publishing division, EREC OJSC»;
- Karputov S.A. — Director of Technological Affiliate of Rosenergoatom Concern OJSC;
- Katsman A.M. — Deputy Director for Production and NPP Operation – Head of Office for New Power Units Commissioning Preparedness;
- Krupsky A.G. — Deputy Director for Production and NPP Operation – Director of Department for NPP Maintenance, Repair and Installation Activities;
- Konyukhova M.G. — Chief specialist of Department for Information and Public Relations;
- Lupishko A.N. — First Deputy Director General of VNIIAES OJSC;

- Lovchev V.N. — Deputy Director of Department for Engineering Support – Head of Material science division;
- Moskalev S.V. — Head of division of Technological Affiliate of Rosenergoatom Concern OJSC;
MNTK-2014 administrator, Programme committee coordinator;
- Nikiforov V.V. — Deputy Director of Technological Affiliate – Head of Fire Safety Service of Rosenergoatom Concern OJSC;
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MNTK-2014 administrator, Organizational committee coordinator;
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- Stakhiv M.R. — Deputy Director of Department for Engineering Support – Head of division for RW and SNF management and preparation to nuclear power units decommissioning;
- Teterin Yu.P. — Deputy Director for Production and NPP Operation – Director of Department for Engineering Support;
- Timonov A.V. — Director of Department for Information and Public Relations;
- Kharlampiev S.A. — Chief expert of Department for International Cooperation and External Economic Affairs;
- Khlebtsevich V.Ye. — Deputy Director for Production and NPP Operation – Director of Department for Emergency Preparedness and Radiation Protection;
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Simultaneous interpretation is provided at:

— Plenary sessions (1st and 3rd Days);

— Sections (subsections) №: 3.1, 3.2, 4.

Consecutive interpretation is provided at the sections (subsections):

1.1.1, 1.1.2, 1.1.3, 1.2.3, 1.3, 5.2.

Address of the Conference venue:

Moscow, Ferganskaya str. 25

By public transport

- “Vykhino” metro station, then by bus № 209, 4th stop (“Art School n.a. Balakirev”)
- Or by route taxi № 209, 610