AGENDA

16–17 September (Saturday – Sunday): Participants arrival and registration, excursions on request

17 September (Sunday evening): Welcome cocktail dinner at hotel Sol Nesebar

18 September (Monday), Hotel Conference Hall

09:00–10:45 Morning session

Session O: Opening session

Chairpersons: Dimitar Tonev (INRNE-BAS), Mikhail Veshchunov (IAEA), Yancho Yankov. (Kozloduy NPP), Vladimir Molchanov (JSC TVEL), Oleg Aydemirov, (JS Rosenergoatom)

Opening and greetings:
Dimitar Tonev (INRNE-BAS), Mikhail Veshchunov (IAEA), Yancho Yankov. (Kozloduy NPP), Vladimir Molchanov (TVEL),

0.1. Dimitar Tonev NUCLEAR TECHNOLOGIES IN BULGARIA, D.Tonev, A.Nikolov, M.Manolova INRNE-BAS, Bulgaria

0.2. Mikhail Veshchunov IAEA ACTIVITIES IN THE AREA OF NUCLEAR POWER REACTOR FUEL ENGINEERING, M.Veshchunov, IAEA, Austria

0.3. Oleg Aydemirov EXPERIENCE OF VVER-1000 FUEL OPERATION IN THE RUSSIAN FEDERATION, O. Aydemirov, JSC Rosenergoatom, Russian Federation

0.4. Alexey Dolgov WWER NUCLEAR FUEL – DEVELOPMENT AND PERSPECTIVES, A.Dolgov, JSC "TVEL", Moscow, Russian Federation

10:45–11:00 Coffee break

SESSION 1 FUEL PERFORMANCE AND OPERATIONAL EXPERIENCE

11:00–12:30 Morning session

Chairpersons: Krassimir Kamenov, Vaclav Mecir

1.1. Krassimir Kamenov EXPERIENCE OF TVSA-12 FUEL IMPLEMENTATION AT KOZLODUY NPP, K. Kamenov, Ml. Milchev, Kozloduy NPP, Bulgaria


1.3. Ville Peri RECENT FUEL RELATED ACTIVITIES AT THE LOVIISA NUCLEAR POWER PLANT, Ville Peri, Fortum Power and Heat Ltd, Fortum, Finland

12:30–14:00  Lunch

14:00–15:30  Afternoon session

Chairpersons: Krassimir Kamenov, Jan Höglund

1.5. Aleksander Lazarenko  SOFTWARE PACKAGE KASKAD FOR NEUTRONIC CALCULATION OF VVER CORES. STATUS AND FEATURES, A. P. Lazarenko, M. Ju. Tomilov, NRC “Kurchatov Institute”, Russian Federation

1.6. Denis Zlobin  “REACTOR SIMULATOR” PROGRAM FOR THE CORE MODELLING OF VVER-1000, VVER-1200, VVER-TOI, Denis Zlobin, NRC “Kurchatov Institute”, Russian Federation

1.7. Jiří Zýbal  THREE YEARS OF OPERATIONAL EXPERIENCE WITH GD-2M+ FUEL AT DUKOVANY NPP, M. Borovička, J. Zýbal, Dukovany NPP, ČEZ, a.s.

1.8. Gábor Bóna  OPERATIONAL EXPERIENCE WITH 15 MONTHS CYCLES AND PLANNED INTRODUCTION OF MODIFIED FUEL TYPES AT MVM PAKS NPP, HUNGARY, Gábor Bóna, MVM Paks NPP, Hungary

15:30–16:00  Coffee break

16:00–17:00  Afternoon session

1.9. David Nesaraj  OPERATIONAL EXPERIENCE OF UTVS TYPE FAS AND REFUELLING CONTINGENCY PLANS IN KKNNP UNIT-1, David Nesaraj, Y. K. Pandey, H.P. Ram Mohan, G. Biswas, Nuclear Power Corporation of India Limited, Mumbai, India


1.11. Carina Önneby  EXPANDING ON THE VVER FUEL MARKET, C. Önneby, J. Höglund, Westinghouse Sweden

18:30–21:30  Dinner

19 September (Tuesday), Hotel Conference Hall

SESSION 2  IMPROVEMENT OF FUEL DESIGN AND OPERATION

09:00–10:30 Morning session

Chairpersons: Ivan Vasilchenko, Victor Makarov

2.1. Ivan Vasilchenko  TASKS FOR FUTURE EVOLUTION OF VVER CORE DESIGN, I.N. Vasilchenko, S.A. Kushmanov, V.V. Vyalitsyn, OKB “GIDROPRESS”, Russian Federation


10:30–11:00  Coffee break

11:00–12:30  Morning session (cont)
2.5. Oleg Morozkin

2.6. Tobias Strömgren
PREDICTION OF CRITICAL HEAT FLUX IN FUEL BUNDLES USING CFD, Tobias Strömgren, Yann Le-Moigne, Westinghouse Electric Sweden AB

2.7. Viktor Makarov
EXPERIMENTAL STUDIES OF THE STRENGTH OF FUEL ASSEMBLIES FOR PRESSURIZED WATER REACTORS, V.V. Makarov, A.V. Seleznyov, A.V. Afanasev, I.V. Matvienko, OKB “GIDROPRESS”, Russian Federation

2.8. Artem Nosenko
EXPERIMENTAL RESEARCH VIBRATIONS FUEL ASSEMBLY WWER, V.V. Makarov, A.P. Nosenko, A.V. Afanasev, Y.V. Egorov, I.V. Matvienko, M.V. Puchkov, OKB “GIDROPRESS, Russian Federation

12:30 – 14:00 Lunch

SESSION 3 FUEL MODELLING AND EXPERIMENTAL SUPPORT

14:00–15:30 Afternoon session

Chairpersons: Boris Volkov, Igor Evdokimov

3.1. Boris Volkov
ROLE OF HALDEN REACTOR PROJECT FOR WWER FUEL DEVELOPMENT AND MODIFICATIONS, B. Volkov, Institute for Energy Technology, OECD Halden Reactor Project, Norway

3.2. Anton Dolgov

3.3. Anatoly Zakharov

3.4. Anatoliy Sorokin
MODELING IN SUPPORT OF EXPERIMENTS IN THE MIR REACTOR FOR JUSTIFICATION OF FISSION PRODUCT RELEASE FROM FAILED FUEL OF ADVANCED DESIGN AND FROM (U,GD)O2 FUEL, A. Sorokin at al., JSC “SRC RF TRINITI”, Moscow, Russian Federation

15:30–16:00 Coffee break

16:00–18:00 Afternoon session (cont)

3.5. Márton Király
OVERVIEW OF THE EXPERIMENTS PERFORMED WITH RUSSIAN CLADDINGS AT MTA-EK, Márton Király, Hungarian Academy of Sciences Centre for Energy Research, Fuel and Reactor Materials Department, Budapest, Hungary

3.6. Artem Lunev
HOT PRESSING OF URANIUM DIOXIDE ADU POWDER AT 250–600 ºC: MICROSTRUCTURAL CHANGES AND DENSIFICATION MECHANISM, Artem Lunev at all., Joint Institute for High Temperatures of the Russian Academy of Sciences, National Research Nuclear University MEPhI, Moscow, Russian Federation

3.7. Artem Lunev
A MULTI-SCALE APPROACH TO MODELLING DISLOCATION SUBSTRUCTURES IN DEFORMED URANIUM DIOXIDE, Artem Lunev, Sergei Starikov, Alexei Kuksin, Joint Institute for High Temperatures of the Russian Academy of Sciences, Moscow, Russian Federation

3.8. Marcin Szuta
MATHEMATICS OF HELIUM BEHAVIOR IN URANIUM DIOXIDE FUEL DURING NEUTRON IRRADIATION IN TERMS OF DEFECT TRAP MODEL, Marcin Szuta, Ludwik Dabrowski, National Centre for Nuclear Research, Otwock-Swierk , Poland
3.9. Dong-Seong Sohn  MICROSTRUCTURAL CHANGES OF ZR-1NB-1SN-0.1FE CLADDING TUBE DURING LOCA SIMULATED CONDITIONS, Cheol Min Lee, Dong-Seong Sohn, Ulsan National Institute of Science and Technology, Ulsan, Republic of Korea

18:30–21:30  Dinner

20 September (Wednesday), Hotel Conference Hall

SESSION 3  FUEL MODELLING AND EXPERIMENTAL SUPPORT (cont.)

09:00–11:00  Morning session

Chairpersons: Arndt Schubert, Lena Oliver

3.10. Arndt Schubert  EXTENSION AND VALIDATION OF THE TRANSURANUS CODE IN THE COURSE OF THE ESSANUF PROJECT, A.Schubert et all, EC JRC, ITU, Karlsruhe, Germany

3.11. Vitezslav Matocha  DEVELOPMENT AND VALIDATION OF THE PELLET-CLADDING MECHANICAL INTERACTION MODELS AT UJV, J. Klouzal, V. Matocha, M. Dostál, ÚJV Řež, a.s., Prague, Czech Republic

3.12. Stanislav Lihhart  SINGLE SIDE AND DOUBLE SIDE OXIDATION OF SPONDE-BASED AND OPTIMIZED E110 ZIRCONIUM ALLOY, Stanislav Lihhart¹, Josef Belac³, Vera Vrtílková, Jakub Krejčí², Jitka Kabatová³, František Manoch³,¹ – ALVEL, a.s., Prague, Czech Republic,² – UJP PRAHA a.s., Prague, Czech Republic

3.13. Evgeny Mikheev  PECULIARITIES OF THE INFLUENCE OF AN INCREASE IN THE CONTENT OF GADOLINIUM OXIDE FROM 5 TO 8% ON THE STRUCTURE OF URANUM-GADOLINIUM TABLETS, Mikheev E.N.¹, Novikov V.V.¹, Lisakov A.V.¹, Fedotov A.V.¹, Sivov R.B.¹, Misiorin D.S.¹, Bahteev O.A.¹, Kalin B.A.², Tenishev A.V.²,¹ VNIINM JSC, Moscow, Russia, ²- NRNU “MEPhI”, Moscow, Russian Federation

3.14. Vladimir Kuznetsov  REACTOR JUSTIFICATION OF WWER FUEL RODS WITH INCREASED URANIUM CONTENT. OPERATING EXPERIENCE AND RAMP TESTS, V. Kuznetsov, JSC “VNIINM”, Moscow, Russian Federation

11:00–11:30  Coffee break

11:30 –12:30  Morning session (cont.)


3.16. Jakub Krejčí  AIR OXIDATION OF SPONGE BASED E110 CLADDING ALLOY AT HIGH TEMPERATURES, Jakub Krejčí¹,², Pavel Vrbka², Jitka Kabátová¹, Jan Kočí¹, František Manoch¹, Věra Vrtílková¹,¹UJP PRAHA a.s., Czech Republic, ²Czech Technical University, Prague, Czech Republic

3.17. Lena Oliver  FISSION PRODUCT ANALYSIS USING THE FPA CODE, Lena Olivera, Olga Pulvera, Kendal Bishopb, aWestinghouse Electric Sweden AB, bWestinghouse Electric Company LLC

12:30–13:30  Lunch
13:30–19:00  Excursion
19:00–21:30  Dinner

21 September (Thursday), Hotel Conference Hall

SESSION 4  FUEL SAFETY AND QUALITY ASSURANCE
09:00–10:45  Morning session

Chairpersons: Vladimir Novikov, Sergey Kryukov

4.1. Joakim Karlsson  THE STUDSVIK CLADDING INTEGRITY PROJECT (SCIP) III - OVERVIEW, J. Karlsson¹, P. Magnusson¹, P. Teijland¹, A. Puranen¹, M. König², P. Beccau², Gerardo Grandi², ¹Studsvik Nuclear AB, Nyköping, Sweden, ²Studsvik Scandpower Inc., Idaho Falls, USA


4.3. Sergey Kryukov  EXPERIENCE OF RIA SAFETY ANALYSES PERFORMANCE FOR KOZLODUY NPP CORE ARRANGED WITH TVSA-12 FUEL ASSEMBLIES, S.A Kryukov, RRC "Kurchatov Institute", Moscow, Russian Federation

4.4. Petya Vryashkova  NEW ZIRCALOY OXIDATION CORRELATIONS OF THE COMPUTER CODE MELCOR 2.1 ANALYSED ON THE BASE OF QUENCH-10 TEST DATA, Petya Vryashkova, Institute for Nuclear Research and Nuclear Energy-BAS, Sofia, Bulgaria

4.5. Martina Mala  SEVEN YEARS OF INSPECTIONS ON TVSA-T FUEL ASSEMBLIES AT TEMELIN NPP, Martina Mala, Centrum vyzkumu Rez s.r.o., Czech Republic

10:45–11:00  Coffee break

SESSION P  POSTER SESSION

11:00–12:00

Chairperson: Mladen Mitev

P.1. Marcin Kopec  FUEL ASSEMBLY DEFORMATION MEASUREMENTS, M. Kopeć, M. Malá, CV Rez, Czech Republic


P.3. Dobromir Dimitrov  CORONA ACADEMY - A COMMON SOURCE OF KNOWLEDGE IN SUPPORT OF VVER TECHNOLOGY, Mladen Mitev, Dobromir Dimitrov, Maria Manolova, INRNE-BAS, Bulgaria


12:00–15:30  Lunch
SESSION 5  
SPENT FUEL PERFORMANCE AND MANAGEMENT

15:30–16:00  
Coffee break

16:00–17:30  
Afternoon session

Chairpersons: Surik Bznuni, Mladen Mitev

5.1. Surik Bznuni  
DEVELOPMENT OF BOUNDING AXUAL BURNUP PROFILE FOR WWER-440 SPENT FUEL ASSEMBLY TRANSPORT CASK DOSE ANALYSIS, S. Bznuni, N. Bagdasaryan, A. Amirjanyan, Nuclear and Radiation Safety Center, Armenia, P. Kohut, Brookhaven National Laboratory, J. Ramsey, US Nuclear Regulatory Commission

5.2. Teymur Aliev  

5.3. János Bencze  
INTERIM STORAGE OF SPENT NUCLEAR FUEL IN PAKS MVDS FACILITY, János Bencze, MVM Paks NPP, Hungary

5.4. Mikhail Kolesnik  
HYDRIDE REORIENTATION MODEL FOR SPENT FUEL CLADDINGS IN DRY STORAGE CONDITIONS, M. Kolesnik, T. Aliev, V. Likhanskii, State Research Center of Russian Federation “Troitsk Institute for Innovation and Fusion Research”, Troitsk, Moscow, Russian Federation

18:30-23:30  
Traditional Bulgarian Dinner

22 September (Friday), Hotel Conference Hall

SESSION 6  
SPECIFIC ISSUES OF WWER-1000 FUEL RELIABILITY

9:30 – 11:00  
Morning session

Chairpersons: Anatoly Enin, Vladimir Molchanov

6.1. Vladimir Molchanov  
PROJECT «ZERO FAILURE LEVEL»: STATUS, PROBLEMS, TASKS FOR THE FUTURE, V.L.Molchanov, JSC“TVEL”, Moscow, Russian Federation

6.2. Vaclav Mecir  
ZERO LEVEL DEFECT PROJECT - EFFECTIVITY, Vaclav Mecir, CEZ a.s., Prague, Czech Republic

6.3. Igor Evdokimov  

11:00 – 11:15  
Coffee break

11:15 – 13:15  
Morning session (cont.)

6.4. Alexander Morylev  
MASHINOSTROITELNY ZAVOD – 100 YEARS OF AGE. ADVANCES IN TECHNOLOGY OF WWER FUEL MANUFACTURE, A. Morylev, PJSC “MSZ”, Elektrostal, Russian Federation

6.5. Anatoly Enin  

6.6. Iosif Asatiani  
OPERATIONAL EXPERIENCE OF VVER FUEL FABRICATED BY PJSC MSZ, Iosif Asatiani, PJSC “MSZ”, Elektrostal, Russian Federation

6.7. Dmitry Davydov  
OPERATION RESULTS OF VVER FUEL ASSEMBLIES MANUFACTURED AT PJSC NCCP, D. Davydov, O. Brovkin, Y. Bezborodov, PJSC “NCCP”, Novosibirsk, Russian Federation

13:15–14:15 Lunch

14:15 – 16:00 - Conference overall discussion and conclusions


16:00–16:15 Coffee break

16:15–17:30 Closing session

Conference closure: Dimitar Tonev

23 – 24 September (Saturday–Sunday): Departure of participants