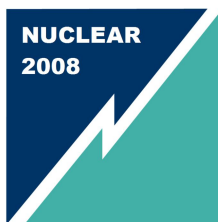




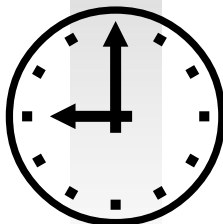
NUCLEAR 2008

Annual International Conference on
Sustainable Development through
Nuclear Research and Education



May 28-30, 2008
Pitești, România

Program



PLENARY SESSION – Room A

May 28, 2008

08:30 – 09:00	Registration	
09:00 – 09:30	Opening Ceremony	
09:30 – 10:00	Simon Webster <i>CE – DG Research</i>	The Euratom Programme – A Strategy for the Future
10:00 – 10:30	Serban Valeca <i>University from Pitesti</i>	Energy – a continuous challenge
10:30 – 11:00	Coffee break	
11:00 – 11:30	Gerard Cognet <i>CEA France</i>	Generation IV – Challenges for research
11:30 – 12:00	Ilie Turcu <i>SCN Pitesti</i>	INR Contribution to the Sustainable Development of Nuclear Energy in Romania
12:00 – 12:30	Ioan Stefanescu <i>ICSI Rm. Valcea</i>	Development Trends in Hydrogen Field. National Centre for Hydrogen and Fuel Cells
12:30 – 14:00	Lunch	



Session I - NUCLEAR ENERGY - Room A

Chairman: Serban Valeca

Co-chairmen: Ilie Turcu

Nuclear reactors

14:00 – 14:20	ENEA, Italy	C. Artioli, H. Ait Abderrahim, G. Glinatsis, L. Mansani, C. Petrovich, M. Sarotto, M. Schikkor	Minor Actinides Transmutation in the EFIT Reactor: A Design Challenge
14:20 – 14:40	AECL	Robert Munro	
14:40 – 15:00	SCN Pitesti	M. Preda, M. Ciocanescu, S. C. Valeca, E. M. Ana, D. Cristea	Full Conversion of Materials and Nuclear Fuel Research&Test – TRIGA SSR 14 MW
15:00 – 15:20	SCN Pitesti	Iosif Prodea, Andrei Rizoiu, Ilie Prisecaru, Nicolae Dănilă	A Neutronic Properties Study of an ACR-1000 Shutoff Rod Design Proposal
15:20 – 15:40	SCN Pitesti	Cezar Doca	Numerical Simulator of the CANDU Fueling Machine Driving Desk
15:40 – 16:00	Coffee break		

Nuclear Technology and Materials

16:00 – 16:20	METAV-R&D S.A. Bucharest	A. Buzaianu, A.F. Olteanu, I.Rusu, V. Manoliu	History on the Use of Industrial Magnesium-Thorium Alloys in Romania
16:20 – 16:40	ICSI Rm Valcea	Nicolae Soflica, Nicolae Bidica, Mariae Deaconu, Ciprian Bucur, Sorin Soare	Conceptual Design of a Tritium Storage Bed
16:40 – 17:00	ICSI Rm Valcea	M. Vladu, S. Brad, F. Vasut, M. Vijulie, M. Constantin	Endurance Tests for WDS
17:00 – 17:20	SCN Pitesti	I. Pirvan, M. Radulescu, L. Velciu, M. Mihalache, A. Dinu	Physico-Chemical Processes Implied in the Formation of Corrosion Deposits on the Fuel Claddings
17:20 – 17:40	SCN Pitesti	M. Radulescu, I. Pirvan	Maintaining of Primary and Secondary Circuit Chemistry – the Key of the Minimum Corrosion of Metallic Components
17:40 – 18:00	SCN Pitesti	Paula Carlan, D. Benga, T. Melek, Maria Mihalache, C. Ducu	Intermetallic Compounds CoAl for γ - Sources
18:00 – 18:20	SITON Bucharest	Viorel Serban, Adrian Panait, Marian Androne, George Ciocan, Ioana Florea	Constructive Solutions to Protect Nuclear Objectives against Earthquakes, Explosions, Shocks and Vibrations

May 28, 2008



SESSION II - ENVIRONMENTAL PROTECTION – Room B

Chairman: Marin Ciocanescu

Co-chairmen: Ion Popescu

Radioprotection

14:00 – 14:20	ICSI Rm Valcea	C. Varlam, I. Stefanescu, D. Dobrinescu , I. Popescu, I. Faurescu	Interference Phenomena in Azeotropic Distillation for Liquid Scintillation Measurement
14:20 – 14:40	Cernavoda NPP	I. Popescu, E. Bobric	Airborne Tritium Emissions Dynamics at Cernavoda NPP, 1997 - 2007
14:40 – 15:00	Cernavoda NPP	Catalina Chitu , Ion Popescu, Vasile Simionov	Occupational Exposure to External Ionising Radiation: Personnel Monitoring and Dose Evaluation at Cernavoda NPP

Chairman: Gabriel Pina

Co-chairmen: Daniela Diaconu

Radioactive Waste Management

15:00 – 15:20	CIEMAT Spain	E. Magro, G. Piña, E. Ruiz, E. Benavides, P. López	Physico-Chemical Cement Matrix Characterization Tests for Ion Exchange Resins from a NPP
15:20-15:40	CNCAN Bucharest	Daniela Dogaru, Cornelia Virtopeanu, Alexandrina Ivan	Dynamic of Radioactive Waste Generation
15:40 – 16:00	Coffee break		
16:00 – 16:20	C.N.H. S.A. Petrosani	Razvan Bogdan Itu	Possibilities of Using New Technology Materials in Constructing the Radioactive Waste Containers
16:20 – 16:40	IFIN HH Bucharest	Gheorghe Dogaru, Felicia Dragolici, Mihaela Nicu	Techniques for Long Term Conditioning and Storage of Radium Sources
16:40 – 17:00	CNCAN Bucharest	Daniela Dogaru, Petre Ilie, Gheorghita Jinescu	Regulatory Review of the C-14 Inventory Proposed for Disposal at the Saligny Planned Near Surface Repository
17:00 – 17:20	SITON Bucharest	Gheorghe Barariu , Theodor Oprescu, Mihaela Filip, Sociu Florin	The Waste Management Plan Integration into Decommissioning Plan to the VVR-S Research Reactor from Romania
17:20 – 17:40	SCN Pitesti	Petre Ilie, Liana Didita, Alexandru Danchiv	Current Status and New Trends in the Methodology of Safety Assessment for Near Surface Disposal Facilities

May 28, 2008

PLENARY SESSION – Room A

May 29, 2008

09:00 – 09:30	Rodin Traicu <i>RAAN</i>	Perspectives and Constrains in the Romanian Energy
09:30 – 10:00	Marius Preda <i>ROMAG</i>	June 17, 1998 – First Heavy Water drop at Drobeta Tr. Severin

Chairman: Ilie Turcu

Co-chairmen: Marin Constantin

Nuclear Safety and Severe Accidents

May 29, 2008

10:00-10:20	ICSI Rm Valcea	Carmen Maria Moraru, Iuliana Stefan, Ovidiu Balteanu, Ciprian Bucur, Liviu Stefan, Anisia Bornea, Ioan Stefanescu	Monitoring System in Labview Data Logging and Supervisory Control Module and Labview 8 with Process Analyses of the Cryogenic Pilot Plant for Tritium Removal
10:20 – 10:40	SCN Pitesti	Marcel Pärvan, Marin Mincu, Octavian Uță, Ana Matei, Steve Palleck, John Montin, Shaun Abbas	Available Prost-Irradiation Examination Techniques to Evaluate the CANDU Fuel Performance
10:40 – 11:00	Cernavoda NPP	Beatrice Rosu	Application of PSA Study at Cernavoda NPP Unit 1
11:00 – 11:20	Coffee break		
11:20 – 11:40	SCN Pitesti	Mirea Mladin	Investigating Applications of ICARE/CATHARE Code to Air Ingress Issues
11:40 – 12:00	SCN Pitesti	Daniela Mladin, Mirea Mladin, Gabriela Radu, Cristina Constantinescu, Marin Preda, Dumitru Cristea, Ion Stefan	Overview of Probabilistic Safety Assessment Activity for Romanian TRIGA SSR 14 MW Reactor
12:00 – 12:20	SCN Pitesti	M. Farcasiu, M. Nitoi, M, Apostol, I. Turcu, Gh. Florescu <i>SCN Pitesti</i>	The Man-Machine-Organization System Analysis for Research Reactor
12:20 – 12:40	SCN Pitesti	Mirela Nitoi, Ilie Turcu, Pavelescu Margarit, Minodora Apostol, Farcasiu Mita, Popa Adrian	Using Failure Mode and Effect Analysis in Identification of Components Sensitive to Ageing
12:40 – 14:00	Lunch		

Chairman: Gabriel Pina

Co-chairmen: Stela Diaconu

Radioactive Waste Management

May 29, 2008

10:00 – 10:20	ANDRAD	Gh. Negut, Gh. Ionita, Ortenzia Niculae, Ion Durdun, Stela Diaconu	Radioactive Waste Management in Romania
10:20 – 10:40	ANDRAD	Ortenzia Niculae, Gianina Gherghe, Veronica Andrei, Alin Petrescu	Main Issues for Developing the Saligny Near-Surface Repository
10:40 – 11:00	SCN Pitesti	Petre Ilie, Alexandru Danchiv, Alice Ionescu, Viorel Deaconu, Gabriel Ghita	Development of the Conceptual and Numerical Models for Semi-Generis Site to Support Performance Assessment for CANDU Spent Nuclear Fuel Disposal
11:00 – 11:20	Coffee break		
11:20 – 11:40	ANDRAD	Cristian Litescu	Radioactive Waste Inventory in Romania – Current Stage

11:40 – 12:00	ANDRAD	Stela Diaconu	Communication Process, Related to LILW Near-Surface Repository Siting
12:00 – 12:20	SCN Pitesti	Gheorghe Vieru	Considerations on the Safe and Security of Radioactive Materials Transport in Romania
12:20 – 12:40	AREN	Traian Mauna, Andriesica Mauna	RADON And Eurocodes
12:40 – 14:00	Lunch		



SESSION III - SUSTAINABLE DEVELOPMENT – Room A

Chairman: Rodin Traicu

Co-chairmen: Voicu Grecu

Strategies in Energy

14:00 – 14:20	SCN Pitesti	Iosif Prodea, Cristina Alice Margeanu, Ilie Prisecaru, Nicolae Dănilă, Corina Aioanei	Nuclear Electricity Share Growing – a Key Factor for Sustainable Energetic Development of Romania in the Next Decades
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International Partnership for a Sustainable Development

14:20 – 14:40	IFIN-HH Bucharest	F. Dragolici, C. Turcanu, Gh. Rotarescu, I. Paunica, I. Ionascu, M. Nicu, Gh. Dogaru, C. Cristache, M. Toma, L. Done, G. Matei, R. Rotaru, D. Matei	International Cooperation in the Field of Waste Management Activities at IFIN-HH
14:40 – 15:00	SCN Pitesti	Daniela Diaconu	ICN's Partnerships in Nuclear Research
15:00 – 15:20	SCN Pitesti	Mihail Cojan	NULIFE- The European NoE "Nuclear Plant Life Prediction"

Education, Continous Formation and Knowledge Transfer

15:20 -15:40	University of Bucharest	Nicolae Ghiordanescu Voicu Grecu Alexandru Jipa	Nuclear Physics Education Today
15:40 – 16:00	Coffee break		
16:00 – 16:20	University from Pitesti	S.C.Valeca, M.Preda, M.Valeca, D.Popescu, E. M. Ana	Human Factor as Nuclear Safety Element
16:20 – 16:40	University from Pitesti	Dumitru Chirleşan, Şerban Constantin Valeca, Monica Valeca, Georgeta Chirleşan	Embedded Learning Methods Implemented in Continuous Education and Knowledge Transfer of the Personnel Working in Radioactive Environment
16:40 – 17:00	IFIN HH Bucharest	Camelia Avadanei	CPSDN – IFIN-HH Involvement in the Nuclear Education
17:00 – 17:20	SCN Pitesti	Marin Constantin, Viorel Hristea	Nuclear Education and Information Technology in the 21 st Century
17:20-17:40	Cernavoda NPP	Cornelia Valache	Cernavoda NPP Training Programs
17:40-17.50	"Politehnica" University Bucharest	Petre Ghitescu	Conclusions of the Round Table "Current Aspects in Nuclear Education"
17:50 – 18:00	SCN Pitesti	Maria Roth	Conclusions of the Round Table "Structural Integrity of Nuclear Components"
18:00 – 18:10	SCN Pitesti	Cristina Margeanu	Conclusions of the Round Table "Nuclear safety – a continous challenge"
18:10	End of the day		

May 29, 2008

POSTERS SESSIONS



Session I - NUCLEAR ENERGY

Nuclear Safety and Severe Accidents

May 28, 2008	S1-P1	Silviu Ionescu, Octavian Uta, Marcel Parvan, Cristian Gentea, Ovidiu Ichim <i>SCN Pitesti</i>	Post Irradiation Tests on CANDU Fuel Irradiated in Power Ramp Conditions
	S1-P2	Camelia Diaconu , Serbanel Marieta <i>SCN Pitesti</i>	Pressurization Events in Primary Side of The CANDU 600
	S1-P3	L. Bedreagă*, Basarab Guzun** * <i>SCN Pitesti</i> ** <i>"Politehnica" University Bucharest</i>	Modeling Human Actions for Loss of Feedwater Initiating Event Using PETRI Nets Formalism
	S1-P4	M. Apostol, M. Constantin, I. Turcu <i>SCN Pitesti</i>	Model Uncertainty in Deterministic Safety Analysis: the Influence of Horizontal Feeders Nodalization on Fission Products Masses, Stored in CANDU Primary Circuit
	S1-P5	Iulian Pavel Nita, Melania Bigu, Mircea Tenescu <i>SITON Bucuresti</i>	Analyze of Water Hammer Phenomena – Application to Deaerator - Feedwater Pump Node

Nuclear reactors

May 28, 2008	S1-P6	G. Matei, M. Cruceanu, D. Dobrea, C. Roth, L. Aioanei <i>SCN Pitesti</i>	Detection Systems of the Failed Nuclear Fuel
	S1-P7	Marieta Serbanel, Camelia Diaconu <i>SCN Pitesti</i>	The Thermal hydraulic Behavior of CANDU 600 Reactor Core Fuelled with SEU 43
	S1-P8	Alexandru Catana*, Prodea Iosif*, Nicolae Danila**, Ilie Prisecaru**, Daniel Dupleac** * <i>SCN Pitesti</i> ** <i>"Politehnica" University Bucharest</i>	SEU43 Fuel Bundles in CANDU 600
	S1-P9	M. Preda, M. Ciocanescu, E. M. Ana, D. Cristea <i>SCN Pitesti</i>	Modernization of Instrumentation&Control System of Primary Cooling Circuit from TRIGA INR 14MW Reactor
	S1-P10	Doru Oprea, Ion Stefan, Marin Preda <i>SCN Pitesti</i>	Analysis Of Scheduled and Incidental Shut-Downs at TRIGA SSR 14 Mw (2001 – 2007)
	S1-P11	Stefan Covaci, <i>SCN Pitesti</i>	Benchmark-Type Modeling of the SCN TRIGA SSR
	S1-P12	Ion Ionita, <i>SCN Pitesti</i>	INR Pitesti TRIGA Reactor Instruments for Structure Analysis
	S1-P13	Gheorghe Negut* Mirela Ancuta**, Violeta Stefan** * <i>ANDRAD</i> ** <i>INR Pitesti</i>	Capsule C5 Operation Modes Analysis

Nuclear Technology and Materials

May 28, 2008	S1-P14	A. Lazar, S. Brad, N. Sofalca, M. Vijulie, I. Cristescu <i>ICSI Rm Valcea</i>	Update of ITER ISS-WDS Process Design
	S1-P15	Elena David, Marius Constantinescu, Felicia Bucura, Claudia Sandru, Claudia Sisu <i>ICSI Rm Valcea</i>	Studies and Evolutions about Recovery of Transitionals Metals from Spent Catalysts
	S1-P16	M. Dragomir, D. Ohai, I. Dumitescu, I. Furtuna <i>SCN Pitesti</i>	Simultaneous Determination of Dissolved Elements in Water Using ICP-ooTQFMS
	S1-P17	M. Fulger, D. Ohai, D. Lucan, M. Mihalache, M. Pantiru, V. Malinovsky <i>SCN Pitesti</i>	Characterization of Incoloy 800 Oxides Developed under Simulated Supercritical Water Conditions
	S1-P18	D. Lucan, M. Fulger, L. Velciu <i>SCN Pitesti</i>	Influence of Aqueous Environment Ph on the Corrosion Behaviour of the CANDU Steam Generator Tubing Material
	S1-P19	L. Popa, M. Radulescu, A. Dinu, L. Velciu <i>SCN Pitesti</i>	The Influence of Some Anions Resulted from Gamma Radiation Action on the Corrosion Susceptibility of Grade 2 and Grade 12 Titanium Alloys
	S1-P20	D. Stefanescu <i>SCN Pitesti</i>	Main Decontamination Techniques Included in Decommissioning Activity

S1-P21	Mariana Tunaru, Maria Dragomir, Anca Voicu <i>SCN Pitesti</i>	Microbiologically Induced Corrosion of Carbon Steel Under Continuous Flow Conditions
S1-P22	A. Dinu*, M. Abrudeanu**, M. Rădulescu*, L.Velciu* <i>*SCN Pitesti **University from Pitesti</i>	The Study of SCC Behavior of Oxidized CANDU Fuel Claddings Using Electrochemical Methods
S1-P23	V. Ionescu, M. Mihalache, S. Florea <i>SCN Pitesti</i>	Spectral Dependence of Ultrasonic Attenuation for Hydrided Zr-2.5%Nb Alloy
S1-P24	Tiberiu Gyongyosi <i>SCN Pitesti</i>	Aspects Regarding Non-Destructive Examination of the Surface of the Ring from the Weld Root Seam of Two Pipes Having Small Diameter, by Replicating Method
S1-P25	Lucian Velciu, Alice Dinu, Dan Doanta, Stefan Dragomir, Laurentiu Popa <i>SCN Pitesti</i>	Analysis of G52-28 Carbon Steel Expose in GS1 Column of Isotopic Change



Session II - ENVIRONMENTAL PROTECTION

Radioprotection

May 29, 2008	S2-P1	R. Dobrin, C. Dulama, Al. Toma <i>SCN Pitesti</i>	Current Levels of Radioactivity along Romanian Danube Basin
	S2-P2	Ion Oprea*, Stefan Covaci*, Tudor Galan**, Radu Vasilache*** <i>*SCN Pitesti **SCGlobal Nuclear Services SA, Constanta *** SC Canberra Packard SRL, Bucharest</i>	Monitoring System of Radioactive Gas Emissions from TRIGA INR 14MW
	S2-P3	Corneliu Mihail Talpalariu, Jeni Elena Talpalariu, Corina Matei, Valentin Stoica, Nicolae Văja, Ion Oprea <i>SCN Pitesti</i>	Local Radiation Protection Measurement Network for TRIGA Reactor Building

Radioactive Waste Management

May 29, 2008	S2-P4	Antoneta Filcenco-Olteanu, V.T. Vacariu, Eugenia Panturu, Rozalia Radulescu, Carmen Diaconu <i>R&D National Institute for Metals and Radioactive Resources Bucharest</i>	Treatment of Waste Water Involved in Acid Uranium Ore Processing
	S2-P5	S. Valeca*, M.Valeca*, I.V.Popescu**, M.Preda* <i>*University from Pitesti ** SCN Pitesti</i>	Elaboration Methodology of Determination of Scaling Factors
	S2-P6	C. Dulama, R. Dobrin, Al. Toma <i>SCN Pitesti</i>	Non Destructive Assay for Waste Characterization. Is it enough?
	S2-P7	M. Iordache, L. Bujoreanu, I. V. Popescu <i>SCN Pitesti</i>	Characterization of Radioactive Waste at Cernavoda NPP Unit 1 During Normal Operation
	S2-P8	Nicoleta Deneanu*, Ion V. Popescu*, Mirela Dulama*, Ion Teoreanu** <i>*SCN Pitesti ***"Politehnica" University Bucharest</i>	Experimental Study for the Assessment of Conditioning Matrices of the Radioactive Aluminum Wastes
	S2-P9	M. Dulama*, I.V. Popescu*, N. Deneanu*, E. Dumitru*, M. Pavelescu** <i>*SCN Pitesti **AOSR</i>	Treatment of Liquid Radioactive Waste by Membranes Techniques – Needs and Future Trends
	S2-P10	Carmen Arsene <i>SCN Pitesti</i>	¹³⁴ Cs, ¹³⁷ Cs and ⁶⁰ Co Migration in Bentonite

Air, Water and Soil Protection

29,	S2-P10	Diana Florescu, Gili Saros, Roxana Ionete, Vasile Stanciu <i>ICSI Rm Valcea</i>	Greenhouse Gases Effects on Global Warming
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	S2-P11	M. Culea, A. Iordache, E. Culea, O. Cozar <i>ICSI Rm Valcea</i>	Residual Pesticides Analysis in Wines By GC/MS
	S2-P12	M. Culea, A. Iordache, E.Culea <i>ICSI Rm Valcea</i>	THMs Determination by GC/MS
	S2-P13	Costinel Diana, Iordache Andreea, Vremera Raluca <i>ICSI Rm Valcea</i>	Stable Isotope Signature (D/H, ¹⁸ O/ ¹⁶ O, ¹³ C/ ¹² C): Important Element In Paleoclimate Reconstruction
	S2-P14	Iordache Ioan, Iordache Mihaela, Nichita Mircea Teodor, Patularu Laurentiu <i>ICSI Rm Valcea</i>	Modern Wastewater Treatment Methods: Sonochemical Processes



Session III - SUSTAINABLE DEVELOPMENT

Strategies in Energy

May 29, 2008	S3-P1	Crețu Ileana, Bălan Iosif Bogdan, Ionilă Maria, Petra Nicoleta Mihaela <i>SCN Pitesti</i>	Nuclear Power a Viable Alternative in Global Warming Context
	S3-P2	Petra Nicoleta Mihaela, Ionila Maria, Datu Mirela, Balan Iosif Bogdan, Cretu Ileana <i>SCN Pitesti</i>	The Role of Research Programs and Commercial Contracts for Increase of Economic Competitiveness and Development at INR Pitesti

Education, Continous Formation and Knowledge Transfer

May 29, 2008	S3-P3	V. Balaceanu, M. Constantin, M. Apostol <i>SCN Pitesti</i>	The State of the Art of the Tacit Knowledge Transfer and Preservation in INR
	S3-P4	Bogdan Balan, Ileana Cretu, Maria Ionila, Mihaela Petra, Silviu Rusu <i>SCN Pitesti</i>	The Website – Necessity or Whim?
	S3-P5	Boruga (Marian) Carmen	The Role of the Negative Selection Activities in Securing of Competence from an Organization Belonging to SEN Units
	S3-P6	Ruxandra Cristina Toma, Radu Cristian Arsene, George Cristian Nistor, Bogdan Florin Tiba, prof. Ilie Prisecaru "Politehnica" University Bucharest	Education and Public Information on Nuclear Power From a Student's Point of View

ROUND TABLES

May 29, 2008	11:20 – 12:40	Round table 1 – Current Aspects in Nuclear Education	Room C
	11:20 – 12:40	Round table 3 – Nuclear Safety – a Continuous Challenge	Room D
	14:00 – 15:40	Round table 2 – Structural Integrity of Nuclear Components	Room B

	Room A	Room B	Room C	Room D
May 28, 2008	08:30 – 9:00	Registration		
	09:00 – 10:30	Plenary Session		
	10:30 – 11:00	Coffee break		
	11:00 – 12:30	Plenary Session		
	12:30 – 14:00	Lunch		
	14:00 – 15:40	Session 1	Session II	
	15:40 – 16:00	Coffee break		
	16:00 – 18:20	Session I	Session II	

May 29, 2008	09:00 – 11:00	Plenary Session		
	11:00 – 11:20	Coffee break		
	11:20 – 12:40	Session I	Session II	Round Table 1
	12:40 – 14:00	Lunch		
	14:00 – 15:40	Session III	Round Table 2	
	15:40 – 16:00	Coffee break		
	16:00 – 18:10	Session III		
	20:00	Conference dinner		

May 30, 2008	09:00	Depart to Vidraru HPP
	10:30 – 13:00	Technical visit of the Virdaru hydro-power plant and dam
	13:00 – 15:00	Lunch
	16:30	Return in Pitesti

ICN Pitești - SHORT HISTORY

1970

At the request of Romanian Government a mission of IAEA experts in Romania favorably advised the necessity of a technological research organization.

1971

Under the name, *Institute for Nuclear Technologies* (ITN) the institute was founded, with the main purpose to provide scientific and technological support for the Romanian Nuclear Program.

1977

Research laboratories are commissioned on the new premises in Pitesti-Colibasi, 130 km NW of Bucharest. The Institute assignments are enlarged being nominated as general designer of Cernavoda NPP nuclear part. Its name is now changed into *Institute for Nuclear Power Reactors* (IRNE).

1978

Requirements for Q.A. in reactor operation was established, also first Q.A. manual accepted by Nuclear Authority. Today Q.A. is broadly implemented in operation of nuclear installations, manufacturing of products, services and in research activities.

1979

On November 18, the first criticality is attained at the TRIGA Materials Testing Reactor, built on the IRNE site.

1980

Commissioning of the Pilot Plant for fabrication of CANDU-type fuel elements.

1984

Commissioning of the Post-Irradiation Examination Laboratory (LEPI).

Commissioning of the Endurance Test Rig for fuel bundles at the Out-of-Pile Testing Dept.

1985

Starting of CANDU fuel bundles fabrication in SPEC (Plant for Fuel Elements Production).

1989

With the arrival of the F/M Heads #4 and #5 intended for Cernavoda Unit 2 NPP, the F/M head test stand is commissioned.

1990

Incorporated in the National Authority for Electric Power (RENEL), IRNE becomes the *Institute for Nuclear Research* (ICN).

1992

The Department for Fuel Elements Production separates from the Institute and becomes distinct unit within RENEL under the name of Nuclear Fuel Factory (FCN).

1994

The Institute specialists take an active part in the commissioning of Cernavoda NPP - Unit 1.

1996

On April 16, the first criticality is attained at Cernavoda Unit 1, directly involving reactor physics specialists from ICN.

1998

The ICN is transferred under the supervision of the Romanian Authority for Nuclear Activities (RAAN), as an affiliate branch.

A c c e s P l a n



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