

ISaR Training Courses 2009/10

P - Processes and Organisation, February 15 - March 05, 2010

P1: Operation of Nuclear Power Plants (February 15 - 19, 2010)

| Subjects | Lecturer | Hours | Time |
|--|---|-------|------|
| Overview of Organizational and Operational Structures of NPPs process structure for operation operational manual, technical specifications, accident management procedures normal operation conditions control of abnormal operation conditions, incidents and accidents shut-down, reactor states during outage, start-up procedures | Dr. Roy Jastrow (Head Nuclear Technology International, EnBW) | | |
| Maintenance and Surveillance maintenance strategy maintenance and periodic tests process of preparation and execution of maintenance and periodic tests outage preparation maintenance and industrial safety ageing phenomena surveillance of structures, systems, components - examples | Dr. Erwin Fischer (Technical Director NPP ISaR, E.ON) | | |
| Specific Technical Aspects of Operation surveillance law and regulations coolant chemistry physics radiation protection environment, industrial safety waste treatment spent fuel | Dr. Volker Grafen (Senior Manager Technical Services, RWE) | | |
| Operating Experience Germany experience feedback and information exchange organizational structures and processes events- national and international Internal information human factor Operating Experience Feedback International Operating Experience Feedback France | Mr Manfred Haferburg (WANO Paris Center) Mr Partick Laine (EDF) | | |
| Safety Management safety management systems tools of Safety management systems Fire protection in nuclear power plants and corresponding nuclear regulations External Hazards | Mr Uwe Jorden (Technical Director NPP Brokdorf, E.ON) Dr. Marina Röwekamp (Team Leader Hazards, GRS) Mr Stefan Kirchner (Energy & Technology, TÜV-Süd) | | |

ISaR Training Courses 2009/10

P - Processes and Organisation, February 15 - March 05, 2010

P2: Building New Nuclear Power Plants (February 22 - 24, 2010)

| Subjects | | Lecturer | Hours | Time |
|--------------------------------------|--|---|-------|------|
| Build up a Nuclear Power Plant | background discussion | Dr. Holger Teichel (Senior Adviser to the CoC New Nuclear Development / Projects, E.ON) | | |
| | approaches licensing | | | |
| | planning of the construction | | | |
| | preparation of plant operation | | | |
| | Generation II und III | | | |
| | | | | |
| Overview of models and their history | preparatory phase up to decision on construction | Dr. Jan Hofmeister (Head of International Nuclear Development UK, RWE) | | |
| | financial provisions | | | |
| | choice of plant design | | | |
| | preparation of decision in principle | | | |
| | | | | |
| Licensing process | environmental impact assessment | TBD | | |
| | siting | | | |
| | review of the design in the construction license phase | | | |
| | regulatory oversight of the construction of NPP in Finland | | | |
| | quality assurance in the NPP project | | | |
| | | | | |
| After decision on construction | construction planning | TBD | | |
| | planning for the grid | | | |
| | development of a safety analysis report | | | |
| | quality assurance | | | |
| | planning and organisation of commissioning | | | |
| | | | | |

ISaR Training Courses 2009/10

P - Processes and Organisation, February 15 - March 05, 2010

P3: Decommissioning of Nuclear Installations (February 25 - 26, 2010)

| | Subjects | Lecturer | Hours | Time |
|---|---|---|-------|---------------|
| 25 February, 2010 | Decommissioning options and phases | Dr. Erich Gerhards (Head of Center of Competence Decommissioning and Dismantling, E.ON) Dr. Ralf Verseemann (Head of Unit Decommissioning and Dismantling, RWE) | 8 | 09.00 - 17.00 |
| | Overview of decommissioning projects | | | |
| | Regulatory aspects | | | |
| | Specific process engineering technologies | | | |
| | Basic requirements on technologies | | | |
| | Dismantling | | | |
| | Component maintenance | | | |
| | Water management | | | |
| | Operational systems for decommissioning | | | |
| | ventilation | | | |
| | water collection and treatment | | | |
| | fire detection and protection | | | |
| | Radioprotection and dose management | | | |
| | Evaluation of experience | | | |
| Typical time schedules and cost estimations | | | | |
| 26 February, 2010 | Conditioning of radioactive wastes | Dr. Heinz Geiser (Managing Director, GNS) | 4 | 09.00 - 12.30 |
| | Storage and transportation | | | |
| | Final disposal | | | |
| | Overview of decommissioning projects | Mr Axel Bäcker (Deputy Head of Department Conceptual Planning and Strategy, EWN) | 4 | 13.30 - 17.00 |
| | Dismantling | | | |
| | Treatment of radioactive substances | | | |
| | Typical time schedules and cost estimations | | | |
| | Experience from and optimisation of decommissioning operation of a large decommissioning project (18 years decommissioning of five power reactors on the Greifswald site) | | | |
| | KGR project introduction | | | |
| | project management / key decisions | | | |
| | stakeholder involvement - interactions | | | |
| | material management and treatment of dismantled material | | | |
| | free measurement / free release of dismantled material | | | |
| | ALARA during practical dismantling | | | |
| lessons learned | | | | |

ISaR Training Courses 2009/10

E - Energy Economics and Policy, March 01 - 05, 2010

E 1: Role of Nuclear Power for Energy Supply and Economics (March 01 - 02, 2010)

| Subjects | Lecturer | Hours | Time |
|--|--|-------|------|
| Energy demand/consumption and supply/resources dependence on population and economic growth different sectors of energy consumption (electricity, heat, traffic, natural gas, etc.) and different technologies (incl. R&D) + transmission and gas, etc.) and different technologies (incl. R&D) + transmission and distribution different load sectors with respect to electricity generation Sustainability in energy policy / economics overview of relevant national and international institutions triangle of goals in sustainability role of energy mix generic evaluation of different energy sources and technologies with respect to sustainability | Prof. Dr. Hermann-Josef Wagner (Institut für Energietechnik - Universität Bochum) | | |
| Energy demand/consumption and supply/resources elasticity, forecasts role of energy for life and civilisation Macroeconomic (and environmental) aspects of energy / electricity, especially of nuclear energy security of supply and risks analysis Ökonomie der Kernenergieakzeptanz Nutzen Risiko Avision demokratische Entscheidungsregeln Wege und Hemmnisse zur Kernenergieakzeptanz | Prof. Dr. Georg Erdmann (Technische Universität Berlin) | | |
| Energy markets and electricity markets value creation chain market mechanism costs and cost structure of electricity generation options regulation of transmission and distribution regime of emissions trading energy taxis | Prof. Dr. Wolfgang Pfaffenberger (Bremer Energie Institut) Prof. Dr. Dietmar Lindenberger (Institut für Energiewirtschaft Köln) | | |

ISaR Training Courses 2009/10**E - Energy Economics and Policy, March 01 - 05, 2010****E 2: Business Economics for Nuclear Power Plants (March 03, 2010)**

| | Subjects | Lecturer | Hours | Time |
|----------------------|---|--|--------------|-------------|
| 3 March, 2010 | Economics and financing of new power plants | Didier Beutier (Areva FG) Bank representative TBD | | |
| | Comparisons for economics of different types of generation capacity | | | |
| | Economics of power plant operation | | | |
| | Economics of decommissioning | | | |
| | Budgeting and economic planning | | | |
| | Impact of financing on the generation, distribution and supply of power | | | |

ISaR Training Courses 2009/10

E - Energy Economics and Policy, March 01 - 05, 2010

E3: Dialogue with Politics and the Public (March 04 - 05, 2010)

| | Subjects | Lecturer | Hours | Time |
|--|--|--|-------|---------------|
| 4 March, 2010 | Public acceptance in Europe | Dr. Joachim Scharioth (Consultant) | 4 | 09.00 - 12.30 |
| | influencing factors and key drivers | | | |
| | differences between member states | | | |
| | Role play on stakeholder interests and interaction | | | |
| | Role of press and media | Prof. Dr. Carsten Reinemann (Institut für Kommunikationswissenschaft und Medienforschung, LMU München) | 4 | 13.30 - 17.00 |
| | general social relevance of mass media (use of media, media as source of informations) | | | |
| | development of the media market (economisation, pressure of competition, acceleration) | | | |
| | selection of news and reality and media-reality ratio | | | |
| effect of the media on recipients and companies and politics | | | | |
| European executive and legislative institutions, political parties | | | | |
| 5 March, 2010 | Public acceptance strategies | Mr Andreas Hotes Mr Henning Banthien (Mediators, IFOK Institut) | 8 | 09.00 - 17.00 |
| | basis approaches | | | |
| | overview of ood partices | | | |
| | arguments for political and public discussions | | | |
| | Role play on stakeholder interests and interaction | | | |
| Case Studies | | | | |