

The UAE: Lessons Learned From a New Nuclear Regulator

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The United Arab Emirates (UAE) is building four South Korean APR-1400 reactors at the Barakah nuclear site. The first is scheduled to enter into commercial operation in 2017. Christer Viktorsson, Director General of the United Arab Emirates's (UAE) Federal Office for Nuclear Regulation, talks to NucNet about the challenges of establishing a nuclear regulatory body from scratch in a country where nuclear stations have never been built before.

Radioactive Waste Management and Public Participation in the EU. Lessons Learnt from the EURATOM Research Framework Programmes

Gianluca Ferraro and Meritxell Martell | Page 709

Since 2000, the EURATOM Framework Programmes have dedicated political attention and economic support to public participation in radioactive waste management (RWM). Although a one-fit-all solution for a participatory RWM does not exist, the diversity that characterizes the European Union (EU) offers a relevant pool of knowledge and experience. The Joint Research Centre has used the knowledge and experience cumulated by relevant EURATOM projects to define a list of general principles for a more participatory approach to RWM. The principles explained in this article can ultimately work as indications for the changes and strategic actions that are needed for a better RWM in the EU.

Developing Strategic Plans for Effective Utilization of Research Reactors

Danas Ridikas | Page 714

Strategic plans are indispensable documents for research reactors (RRs) to ensure their efficient, optimized and well managed utilization. A strategic plan provides a framework for increasing utilization, while helping to create a positive safety culture, a motivated staff, a clear understanding of real costs and a balanced budget. A strategic plan should be seen as an essential tool for a responsible manager of any RR, from the smallest critical facility to the largest reactor. Results and lessons learned are shown from the IAEA efforts to help the RR facilities developing strategic plans, provide review and advise services, organize national and regional stakeholder/user workshops, prepare further guidance and recommendations, document and publish guidance documents and other supporting materials.

Report on the 14th Regional Conference of the German Branch of the International Nuclear Law Association

Ulrike Feldmann | Page 719

The 14th Regional Conference of the German National Group of the Association Internationale du Droit Nucléaire/International Nuclear Law Association was held in Nuremberg on 28 and 29 September 2015. About 100 participants from Germany and abroad participated the conference. The topics of the five Working sessions were: Turnkey – a viable contractual concept for nuclear new build and decommissioning? Access to justice in environmental law and related to international investments disputes. Nuclear Liability – Latest Developments. Legal requirements on the final disposal of nuclear waste – a Global overview. Nuclear Safety in the EU.

Project Management for the Decommissioning and Dismantling of Nuclear Facilities

Jörg Klasen, Burkhard Seizer, Tobias Schütz and Oliver Wilhelm | Page 724

The decommissioning of nuclear power plants is executed in a classic project manner as it is known from other construction projects. It is obvious to use the known portfolio of project management tools. The complexity that is created by the large size of the project in combination with safety requirements of the nuclear industry has to be handled. Complexity can only be managed addressing two main drivers: Prioritization and speed (agility) in project execution. Prioritization can be realized by applying tools like Earned Value Management. A high speed of project execution is established by applying Agile Management like SCRUM-methods. This method is adopted in the context of the cooperation "Complex Projects" to the needs of nuclear industry.

Decontamination of the Reactor Pressure Vessel and Further Internals and Auxiliary Systems in the German Boiling Water Reactor Isar-1

Michael Fischer, Luis Sempere Belda, Ashim Basu, Christian Topf, Thomas Erbacher, Thomas Hiermer, Bernhard Schnurr, Thomas van Appeldorn and Christian Volkmann | Page 729

The German nuclear power plant ISAR 1 (KKI 1), a 878 MWe boiling water reactor of KWU design, was shut down on March 17th, 2011. With the objective to minimize the plants activity inventory accompanied by the reduction of contact dose rates of systems and components the project "decontamination of the RPV incl. steam dryer and water separator and the connected auxiliary systems" was implemented in the first quarter of 2015. One major focus within the project was the specific in-situ decontamination of the steam dryer.

Fluid Dynamics Evaluation of Split Vane Grid Spacer in a Small Modular Reactor

Mohammad Nazifi fard, Mohammadreza Nematollahi and Kune Y. Suh | Page 738

This paper numerically evaluates the effect of a split vane grid spacer on thermohydrodynamics in a subchannel of a typical small modular pressurized water reactor. The turbulent convective heat transfer and pressure drop are numerically calculated. Thermohydrodynamics and neutronics coupling would indeed be interesting for more quantitative analyses of the fuel assembly design, heat transfer correlation and mixing coefficient for the System-Integrated Modular Advanced Reactor (SMART) being developed by the Korea Atomic Energy Research Institute (KAERI).

Scientists and Professionals From All Around the World in Karlsruhe: Frédéric Joliot/Otto Hahn Summer School 2015 on Nuclear Reactors "Physics, Fuels and Systems"

Victor H. Sánchez-Espinoza and Ulrich Fischer | Page 745

Every two years, the Karlsruhe Institute of Technology (KIT) organizes the "Frédéric Joliot/Otto Hahn (FJOH) Summer School" together with the Commissariat à l'Énergie Atomique (CEA). In this year, the FJOH Summer School took place at the Akademiehôtel in Karlsruhe from 19 to 28 August 2015. The topic of this year's school

was "Enhanced Reactor Safety: Design and Simulation of LWR Evolutionary Cores". Experts from internationally recognized research institutions and Universities e.g. USA, Japan, Korea and Europe gave lectures about the current status and trends on the related fields.

AMNT 2015 Key Topics: Decommissioning Experience & Waste Management Solutions

Klaus Büttner; Stefan Klute | Page 746

Summary report on the Topical Sessions "Radioactive Waste Management, Storage and Disposal" and "Decommissioning of Nuclear Facilities – Challenges and Solutions" of the 46th Annual Conference on Nuclear Technology (AMNT 2015) held in Berlin, 5 to 7 May 2015. Other Sessions of AMNT 2015 have been covered in atw 7 to 11 (2015) and will be covered in further issues of atw.

60th year atw: The Sizewell B Project

John G. Collier | Page 753

The Sizewell B project has demonstrated the capability of the UK's manufacturing industry to undertake large projects and to meet the most demanding international standards – it is a triumph for the UK nuclear industry. The paper outlines the background to the decision to build Sizewell B, it runs through the design and construction phases and completes the cycle with the station's commissioning and connection to the UK electricity grid. To sum up, the Sizewell B project is a success story.

As Climate Talks Resume, Time is Running Out to Bring Low-carbon Equality to Energy Markets

John Shepherd | Page 762

As 2015 draws to a close, climate change is again in the spotlight as a result of the 21st Conference of the Parties to the United Nations Framework Convention on Climate Change in Paris. This is an issue that has been brought into sharp focus as a result of recent early closures and further announcements in the US. This is not a result of safety assumptions or market incompatibility but of imbalances in the U.S. energy market which dates back to the late 1990s. As the European Union prepares for the introduction of a new electricity market design, policymakers would do well to heed the unfortunate lessons from the US.