

Practical Skills for Reactor Incident Simulation: PARCS and TRACE Codes

I work at the Nuclear and Radiation Safety Centre of Armenia which is the technical support organization of Armenian Nuclear Regulatory Authority (ANRA). I am leading specialist on the analyses of the thermo-hydraulic processes. As Armenia is always willing to use modern codes and approaches during safety analyses of the Armenian NPP fellowship was requested to gain knowledge about TRACE code which is the flagship system thermo-hydraulic code of the US NRC.

The four-week fellowship took place at the Brookhaven National Laboratory. The supervisor of the on job training was Dr. Peter Kohut, research scientist at the Nuclear Science and Technology Department.

The main purpose of this fellowship was to gain specific knowledge related to application of TRACE code to VVER reactor type plants, and particularly to assess applicability of the TRACE code 3D modeling capabilities to VVER-440 type reactors.

After returning to my home country, I will be able to perform safety analyses using developed TRACE model for Armenian NPP. Utilizing 3D capabilities of the TRACE code scenarios will be evaluated for which 3D flow phenomena is of main importance such as boron dilution, asymmetric reactor coolant pump startup, etc.

Results of these analyses will be used by ANRA for licensing and decision making processes.



HOVHANNES HOVHANNISYAN

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