EXPERT SEMINAR REVIEWS RESULTS OF THE NEA RASPLAV PROJECT

The final results of the RASPLAV Project, sponsored by the OECD Nuclear Energy Agency (NEA), were reviewed on 14-15 November at an international gathering held in Munich (Germany). The purpose of the project was to support accident management strategies for potential reactor accident scenarios involving a core melt.

Strategies and measures for the management of severe accidents, aimed at reducing the risk of large radioactive releases from a nuclear power plant damaged during such an accident, have been implemented in most OECD countries. In the unlikely but possible case of a melting of the reactor fuel, accident management can include measures to retain the molten mass inside the reactor pressure vessel. Confirmatory experimental research carried out as part of the RASPLAV Project has significantly contributed to determining the conditions under which such in-vessel retention strategies would be successful.

All major nuclear safety organisations in OECD countries are actively using the results of the project to further develop computer codes that will be used to perform assessments in their power reactors.

The RASPLAV Project, initially started under a Russian-American co-operation agreement, was established as an OECD/NEA joint project six years ago as the first such project located in a non-member country. It consisted of four large-scale tests complemented by a series of smaller-scale experiments, all involving the use of materials representative of power reactor cores. Experiments with these test materials in molten condition required temperatures of approximately 3000° C. They were carried out at the Russian Kurchatov Institute near Moscow by an experimental team led by Dr. Vladimir Asmolov. The analytical work was done at the Institute of Nuclear Safety (IBRAE) of the Russian Academy of Science. The other participating Russian organisations were the Russian Ministry of Atomic Energy, the Ministry of Science and Technology Policy and the Federal Nuclear and Radiation Safety Authority.

\(^1\) “RASPLAV” means "melt" in Russian.
The RASPLAV Project brought together Russia and sixteen OECD Member countries, including the United States, Canada, the Republic of Korea, Japan and twelve European countries. These participants have recently confirmed their intention to sponsor a follow-up to RASPLAV called the MASCA Project, an experimental programme to be carried out at the Kurchatov Institute over the next three years. The objective of MASCA will be to investigate phenomena arising from particular melt compositions that can ultimately affect the thermal load of the reactor pressure vessel.

Eighty experts from fourteen countries attended the Munich Seminar, which was hosted by the German Gesellschaft für Anlagen- und Reaktorsicherheit (GRS). The executive summary of the seminar will be made available on the OECD Nuclear Energy Agency web site www.nea.fr early in December 2000.

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