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Management of Spent Nuclear Fuel of Nuclear Research Reactor VVR-S at the National Institute of Physics and Nuclear Engineering, Bucharest, Romania

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The Nuclear Research Reactor VVR-S (RR-VVR-S) located in Magurele-Bucharest, Romania, was designed for research and radioisotope production. It was commissioned in 1957 and operated without any event or accident for forty years until shut down in 1997. In 2002, by government decree, it was permanently shutdown for decommissioning. The National Institute of Physics and Nuclear Engineering (IFIN-HH) is responsible for decommissioning the RR-VVR-S, the first nuclear decommissioning project in Romania. In this context, IFIN-HH prepared and obtained approval from the Romanian Nuclear Regulatory Body for the Decommissioning Plan. One of the most important aspects for decommissioning the RR-VVR-S is solving the issue of the fresh and spent nuclear fuel (SNF) stored on site in wet storage pools. In the framework of the Russian Research Reactor Fuel Return Program (RRFR), managed by the U.S. Department of Energy and in cooperation with the International Atomic Energy Agency and the Rosatom State Corporation, Romania repatriated all fresh HEU fuel to the Russian Federation in 2003 and the HEU SNF will be repatriated to Russia in 2009. With the experience and lessons learned from this action and with the financial support of the Romanian Government it will be possible for Romania to also repatriate the LEU SNF to the Russian Federation before starting the dismantling and decontamination of the nuclear facility.

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