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Features of application of IAEA safeguards during refueling of spent fuel on floating power unit for foreign markets with a reactor unit of the RITM type

After the successful commissioning of *Akademik Lomonosov* floating power unit with the KLT-40S reactor unit, the next step of ROSATOM was the development of floating power units for foreign markets with the RITM type reactor unit (FPU). The technical solutions of the FPU are based on practical experience in the design and operation of nuclear icebreakers and solving problems to ensure the safety of operation of nuclear power plants in the harsh conditions of the North. The technology of refueling the RITM series reactors has a number of features compared to the technology of refueling other nuclear power plants with water-powered reactors. RITM-type facilities have never been placed under IAEA safeguards, and their application requires additional analysis. Assumed that the FPU will be operated at the operation site for a long period of time, and all fuel handling operations will be carried out at a specialized enterprise in the Russian Federation. The article will consider the main features of fuel management using the example of FPU with the RITM-200M reactor unit from the point of view of IAEA safeguards, and present the developers' vision of nonproliferation tasks regarding technical features of FPU.

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Confirm that the work is original and has not been published anywhere else

YES

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