International Conference on the Management of Spent Fuel from Nuclear Power Reactors 2019: Learning from the Past, Enabling the Future



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EXPERIENCE AND PROSPECTS OF SPENT NUCLEAR FUEL REPROCESSING AT MAYAK

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Development of atomic power engineering on a global scale has made it necessary to address problems associated with spent nuclear fuel (SNF) management. Operation of nuclear facilities resulted in accumulation of large amount of SNF with various compositions and geometries. The SNF is accumulated both during electric power generation at NPPs and operation of naval propulsion reactors by surface and submarine fleet, and during research and development of new approaches to fuel management carried out at nuclear research centers. There are two competing approaches to management of generated SNF. One approach is based on long-term storage with subsequent direct disposal (open cycle), while the other one is connected with radiochemical reprocessing (closed cycle). The Russian Federation adopted a strategy of closed nuclear cycle with SNF reprocessing and recycling of recovered products resulted from reprocessing. Implementation of this strategy is closely connected with SNF reprocessing carried out by Mayak PA.

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Country or International Organization

Russian Federation

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