

SPECIAL SECTION

Conversion of Russian Plutonium Production Reactors

Editor's Note: The articles and comments in the following discussion of the conversion of the Russian plutonium production reactors were written in spring 1997. Since that time, a number of meetings have been held among members of Minatom, Gosatomnadzor, the Kurchatov Institute, and Pacific Northwest National Laboratory to discuss technical conversion issues. Nevertheless, the authors basic views have not diverged from those presented here. All seem to agree that the Kurchatov Institute design will create a need for an increased number of control rods, but there is still some disagreement about the cost of such an upgrade and the time required to implement it. Recent inspections of the reactors have led to the expectation that they will continue to be operable for another ten to fifteen years, as opposed to roughly five years as was previously thought. An issue mentioned briefly in the article—the choice of whether to use highly-enriched or low-enriched uranium—will be the subject of a forthcoming article. The section overall provides an update on a subject first discussed in Science and Global Security in 1994.¹

1 Dmitriev, A.M., "Converting Russian Plutonium-Production Reactors to Civilian Use," *Science and Global Security*, Vol. 5, (1994), pp. 37–46.